NR9/10011/1958



BUREAU OF MINES

Museum Building

14th Avenue and Sherman Street

DENVER 2, COLORADO

ANNUAL REPORT

for the Year

1958 Marin la a-Mary Callery Callery



WALTER E. SCOTT, JR. Commissioner of Mines

Publication Approved by E. G. Spurlin, State Controller



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Letter of Transmittal

May 1st, 1959

Honorable Steve McNichols Governor of Colorado State Capitol Building Denver 2, Colorado

Dear Governor McNichols:

In compliance with the requirements of the law, Chapter 92, Article 32, Section 11, of the Colorado Revised Statutes 1953, I have the honor to transmit herewith the Report of the State Bureau of Mines for the year 1958.

Respectfully submitted,

Walter E. Scott, Jr., Commissioner of Mines

Personnel of The Colorado Bureau of Mines 1958

WALTER E. SCOTT, JR., Commissioner of MinesCentral City
G. A. (BUD) FRANZ, JR., Deputy CommissionerDenver
NORMAN R. BLAKE, Inspector, District No. 1 Black Hawk
FRED E. THEOBALD, Inspector, District No. 2 Canon City
JOHN W. DOYLE, Inspector, District No. 3 Leadville
ELZIE D. RAY, Inspector, District No. 4
JOSEPH L. KEATING, Deputy Inspector Leadville
JOHN H. PAKKA, Deputy InspectorTelluride
RICHARD C. GROOM, MineralsDenver
MARGARET G. LAWRENCE, Administrative Asst. Denver
THELMA L. MacMANUS, Account ClerkDenver
NAOMI S. JONES, Clerk Stenographer Denver
AGNES K. BRENNAN, Clerk Typist Denver

Districts of Inspection

COLORADO BUREAU OF MINES

- DISTRICT NO. 1, all of the following counties: Adams, Arapahoe, Boulder, Cheyenne, Clear Creek, Denver, Gilpin, Jefferson, Kit Carson, Larimer, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma.
- DISTRICT NO. 2, all of the following counties: Baca, Bent, Crowley, Custer, Douglas, Elbert, El Paso, Fremont, Huerfano, Kiowa, Las Animas, Lincoln, Otero, Park, Prowers, Pueblo, and Teller.
- pistrict No. 3, all of the following counties: Alamosa, Chaffee, Conejos, Costilla, Eagle, Garfield, Grand, Jackson, Lake, Mineral, Moffat, Pitkin, Rio Blanco, Rio Grande, Routt, Summit, and that part of Gunnison County in the extreme northwest corner and lying north of the 39th degree of latitude, and that part of Saguache County lying south and east of the Continental Divide.
- DISTRICT NO. 4, all of the following counties: Archuleta, Delta, Dolores, Hinsdale, La Plata, Mesa, Montezuma, Montrose, Ouray, San Juan, San Miguel and Gunnison County, except the extreme northwest corner lying north of the the 39th degree of latitude and that part of Saguache County lying north and west of the Continental Divide.

MAP SHOWING DISTRICTS OF INSPECTION

Commissioners of Mines

HARRY A. LEE	May 11, 1895-May 10, 1903
E. L. WHITE	May 10, 1903-May 10, 1907
T. J. DALZELL	May 10, 1907-May 10, 1911
T. R. HENAHEN	May 10, 1911-May 10, 1915
FRED CARROLL	May 10, 1915-May 10, 1919
HORACE F. LUNT	June 1, 1919-June 1, 1923
JOHN T. JOYCE	June 1, 1923-June 12, 1939
EDWARD P. ARTHUR	June 12, 1939-August 26, 1943
FRED JONES	September 27, 1943-April 25, 1950
WALTER E. SCOTT, JR	May 3, 1950

Publications of the Bureau of Mines

BULLETINS

- Bulletin No. 1, Recommendations for Safety Appliance in Mining, Harry A. Lee, Commissioner of Mines, 1896.
- Bulletin No. 2, Precious Metal Production for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.
- Bulletin No. 3, Mining Laws, Relative to Bureau of Mines Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1899.
- Bulletin No. 4, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1901.
- Bulletin No. 5, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1902.
- Bulletin No. 6, Regulations Relative to the Construction, Equipment and Operation of Metalliferous Mines, Mills and Metallurgical Plants, Recommendations and Mineral Production for 1905, E. L. White, Commissioner of Mines, 1906.
- Bulletin No. 7, Federal and State Laws Relating to Mining, Fred Carroll, Commissioner of Mines, 1916.
- Supplement to Bulletin No. 7, Mining Laws Enacted by the Twenty-First General Assembly, Fred Carroll, Commissioner of Mines, 1917.
- Supplement No. 2 to Bulletin No. 7, Amendments to the Mining Laws Enacted by the Twenty-Second General Assembly, Horace F. Lunt, Commissioner of Mines, 1919.
- Supplement No. 3 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-Third General Assembly, Horace F. Lunt, Commissioner of Mines, 1921.
- Supplement No. 4 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-Fourth General Assembly, Horace F. Lunt, Commissioner of Mines, 1923.
- Bulletin No. 8, The Oil Shales of Northwestern Colorado, Horace F. Lunt, Commissioner of Mines, 1919.
- Bulletin No. 9, Mine Safety Standards, Horace F. Lunt, Commissioner of Mines, 1920.
- Bulletin No. 11, Federal and State Laws Relating to Mining, John T. Joyce, Commissioner of Mines, 1931.
- Bulletin No. 12, Mining Laws of Colorado, Edward P. Arthur, Commissioner of Mines, 1942.

- Bulletin No. 13, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1946.
- Bulletin No. 14, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1949.
- Bulletin No. 15, Oil Well Safety Laws, Walter E. Scott, Jr., Commissioner of Mines, 1953.
- Circular No. 1, Location of Lode and Placer Mining Claims, Walter E. Scott, Jr., Commissioner of Mines, 1953.
- Bulletin No. 16, Colorado Mining Laws with Rules and Regulations, Walter E. Scott, Jr., Commissioner of Mines, 1954.
- Circular No. 1, Revised, Location of Lode and Placer Mining Claims, Walter E. Scott, Jr., Commissioner of Mines, 1957.

REPORTS

- Report of Bureau of Mines, Colorado, from its establishment in May, 1895, to November 30, 1896, Harry A. Lee, Commissioner of Mines, 1896.
- Report for the Year 1897, Harry A. Lee, Commissioner of Mines, 1898.
- Report for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.
- Biennial Report for the Years 1899-1900, Harry A. Lee, Commissioner of Mines, 1900.
- Biennial Report for the Years 1901-1902, Harry A. Lee, Commissioner of Mines, 1903.
- Biennial Report for the Years 1903-1904, E. L. White, Commissioner of Mines, 1905.
- Biennial Report for the Years 1905-1906, E. L. White, Commissioner of Mines, 1907.
- Biennial Report for the Years 1907-1908, T. J. Dalzell, Commissioner of Mines, 1909.
- Biennial Report for the Years 1909-1910, T. J. Dalzell, Commissioner of Mines, 1911.
- Biennial Report for the Years 1911-1912, T. R. Henahen, Commissioner of Mines, 1913.
- Biennial Report for the Years 1913-1914, T. R. Henahen, Commissioner of Mines, 1914.
- Biennial Report for the Years 1915-1916, Fred Carroll, Commissioner of Mines, 1916.
- Biennial Report for the Years 1917-1918, Fred Carroll, Commissioner of Mines, 1919.

- Annual Report for the Year 1919, Horace F. Lunt, Commissioner of Mines, 1920.
- Annual Report for the Year 1920, Horace F. Lunt, Commissioner of Mines, 1921.
- Annual Report for the Year 1921, Horace F. Lunt, Commissioner of Mines, 1922.
- Annual Report for the Year 1922, Horace F. Lunt, Commissioner of Mines, 1923.
- Annual Report for the Year 1923, John T. Joyce, Commissioner of Mines, 1924.
- Annual Report for the Year 1924, John T. Joyce, Commissioner of Mines, 1925.
- Annual Report for the Year 1925 was fully prepared but, because of lack of funds, was not printed. The manuscript is on file in the office of the State Bureau of Mines.
- Annual Report for the Year 1926, John T. Joyce, Commissioner of Mines, 1927.
- Annual Report for the Year 1927, John T. Joyce, Commissioner of Mines, 1928.
- Annual Report for the Year 1928, John T. Joyce, Commissioner of Mines, 1929.
- Annual Report for the Year 1929, John T. Joyce, Commissioner of Mines, 1930.
- Annual Report for the Year 1930, John T. Joyce, Commissioner of Mines, 1931.
- Annual Report for the Year 1931, John T. Joyce, Commissioner of Mines, 1932.
- Annual Report for the Year 1932, John T. Joyce, Commissioner of Mines, 1933.
- Annual Report for the Year 1933, John T. Joyce, Commissioner of Mines, 1934.
- Annual Report for the Year 1934, John T. Joyce, Commissioner of Mines, 1935.
- Annual Report for the Year 1935, John T. Joyce, Commissioner of Mines, 1936.
- Owing to lack of funds the 1936 Annual Report of the State Bureau of Mines was not published.
- Annual Report for the Year 1937, John T. Joyce, Commissioner of Mines, 1938.
- Owing to lack of funds the 1938 Annual Report of the State Bureau of Mines was not published.

- Annual Report for the Year 1939, Edward P. Arthur, Commissioner of Mines, 1940.
- Owing to lack of funds the 1940 Annual Report of the State Bureau of Mines was not published.
- Annual Report for the Year 1941, Edward P. Arthur, Commissioner of Mines, 1942.
- Annual Report for the Years 1942 and 1943, Fred Jones, Commissioner of Mines, 1944.
- List of Mines for the Year 1944, Fred Jones, Commissioner of Mines, 1945.
- List of Mines for the Year 1945, Fred Jones, Commissioner of Mines, 1946.
- Annual Report for the Year 1946, Fred Jones, Commissioner of Mines, 1947.
- Annual Report for the Year 1947, Fred Jones, Commissioner of Mines, 1948.
- Annual Report for 1948 was not published.
- Annual Report for the Year 1949, Walter E. Scott, Jr., Commissioner of Mines, 1950.
- Annual Report for the Years 1950 and 1951, Walter E. Scott, Jr., Commissioner of Mines, 1952.
- Annual Report for the Year 1952, Walter E. Scott, Jr., Commissioner of Mines, 1953.
- Annual Report for the Year 1953, Walter E. Scott, Jr., Commissioner of Mines, 1954.
- Annual Report for the Year 1954, Walter E. Scott, Jr., Commissioner of Mines, 1955.
- Annual Report for the Year 1955, Walter E. Scott, Jr., Commissioner of Mines, 1956.
- Annual Report for the Year 1956, Walter E. Scott, Jr., Commissioner of Mines, 1957.
- Annual Report for the Year 1957, Walter E. Scott, Jr., Commissioner of Mines, 1958.

Foreword

The Bureau of Mines of the State of Colorado was established by an Act of the Tenth General Assembly and approved March 30, 1895. The Bureau of Mines Law established the office of Commissioner of Mines which had been authorized by the Colorado State Constitution in 1876 (Article 16, Section 1), and charged the Commissioner of Mines, among other things, with the supervision of Metal Mine Inspection and the enforcement of laws relative to health and safety in Metal Mines. Subsequently, this Act was broadened to include "any ore mill, sampling works, smelter, metallurgical plant, rock quarry, clay pit, and rock excavations, tunnels, or mine workings of whatever kind or character, except coal mines."

The Thirty-sixth General Assembly in 1947 passed an Act requiring, in addition to the above, that the Commissioner of Mines conduct safety inspection of all oil wells, property and equipment appurtenant immediately and used in connection with producing oil wells and further charged him with the enforcement of laws relating to the health, safety, and welfare of any person employed in such wells, or other property.

From time to time, and by various opinions and decisions, the Colorado Bureau of Mines, under the direction of the Commissioner of Mines, has been authorized and empowered to make safety inspections of all underground metal or mineral mines, open pit or other surface mines, rock and mineral quarries, clay pits and mines, earth and rock dams, water canals, highway excavations, highway gravel pits, all rock excavations, rock tunnels or any mine workings of whatever kind or character (except coal mines), ore mills, mineral grinding plants, highway gravel crushing plants, sampling works, smelters, chemical plants producing a chemical from ore or minerals, metallurgical plants, oil and gas wells and all equipment and machinery used in connection with any of the above and all buildings thereon.

The Commissioner of Mines was authorized to make such rules and regulations as may be necessary for carrying out provisions of safety, and he has further been charged with the enforcement of laws relating to the health, life, safety and welfare of all persons employed in any of the above mentioned categories. The Commissioner, upon receipt of reliable information indicating any condition that might be injurious or dangerous to the health or safety of workmen employed in these places, or any time when he deems it necessary, makes inspections or has inspections made by the inspectors of the Bureau of Mines who report to him on any unsafe condition or unsafe practice. Whenever possible, all accidents are in-

quired into and a record is kept giving complete information concerning accidents. All fatal accidents are promptly inquired into by an inspector and a complete written report, made to the Commissioner of Mines, becomes a part of the records of the Bureau of Mines.

The Bureau of Mines is required to disseminate such information concerning mining and minerals as may be required by the public, and when he has opportunity and means, the Commissioner of Mines is charged with collecting and preserving mineral specimens and accumulating technical and other data relating to mining, metallurgical processes and geology. He is also required to examine, report on and record the geological formation of important mining districts or mining areas.

The Commissioner of Mines has authority to undertake any research project which would be of assistance to those engaged in mining or which in any way would help to develop the mineral resources of Colorado. He is charged with the responsibility of making investigations regarding prospecting, buying, selling, transporting, treating and reducing ores and minerals, and of recording the progress of the mineral industry providing, of course, that he has means therefore to do so.

The Commissioner of Mines may, from time to time, with the consent of the Governor, compile, publish and distribute bulletins on subjects, districts and counties. When considering a county or district, the report shall give in detail the history of the locality, the geology, the record of mines and mills, the processes of treatment with results, and shall classify and locate mining property and prospects, together with maps of the same provided, of course, that there are appropriations for such work.

The Bureau of Mines has in its custody one of the very finest mineral collections in existence. In addition to the specimens from all over the world, one of the most unusual features of this collection is the fact that it contains specimens of ore from all of the great mines of Colorado. While the collection is visited annually by thousands of tourists, it continues to be of much interest and concern to prospectors, miners, engineers, geologists and persons genuinely interested in Colorado's mineral industry. Foreign engineers and geologists have been most enthusiastic about the Colorado collection. Many new specimens from Colorado mines were added to the collection during 1958.

The first and foremost function of the Colorado Bureau of Mines is Safety Inspection. By inspections and investigations consistent efforts are made to see that safe methods and safe practices are used to protect the health, life, safety and welfare of all persons employed in the mineral and other industries under the jurisdiction of the Bureau.

In addition to their regular duties of inspection and investigations, the four District Inspectors and the two Deputy Inspectors for the Bureau of Mines are qualified First-Aid Instructors. They teach the standard United States Bureau of Mines course and many classes are taught by them each year. Colorado Bureau of Mines inspectors are also qualified to give instruction in the emergency use of the Chemox Breathing apparatus along with instruction as to rescue operations in toxic mine atmosphere. Preliminary ventilation surveys are made by the department and advice and assistance are given to the operator relative to safety of operation.

Advice and information are freely given to prospectors and small operators in order to further the State's mineral development but no written reports on mines are made and care is taken not to encroach on the proper field of consulting engineers and geologists.

Much of the work of the Bureau of Mines, including this report, would not be possible if it were not for the generous cooperation of other departments and agencies. It is impossible for us to thank individually the persons to whom we are indebted, but we are most grateful to all who have been helpful.

The compiling and preparations of this report have been the work of the entire staff of the Bureau, including the inspectors who furnished much of the data concerning their districts. Each and every member of the staff is to be congratulated and thanked for his most generous cooperation and help.

Every effort has been made to assure accuracy and completeness of the data used in the report but changes, due to removal and altered mining conditions, are constantly taking place which may cause some omissions or mistakes to appear in the publication. It will be most appreciated if any additions, corrections or errors are brought to the attention of the Colorado Bureau of Mines.

The publication of this report is authorized by Chapter 92, Article 32, Section 11, of the Colorado Revised Statutes, 1953.

Minerals in 1958

For the first time in eleven years Colorado's mineral production was less than the preceding year, due to falling metal prices which were responsible for a halt in many mining operations. A decrease in the demand for petroleum products resulted in a lower oil production in the State although exploration and development activity was nearly equal to 1957. This year's total mineral production of \$313,965,710 was \$41,346,416 less than in 1957 or a decrease of 11%. Decreased production was noted in beryllium, copper, feldspar, gold, lime, manganese, silver and petroleum while increases were noted in clays, natural gas, sand and gravel, uranium and vanadium. Gold production was lower than at any time in the last eighty years. Tungsten production in Boulder County was at a standstill due to the termination of the General Services Administration purchase program and low tungsten prices. Molybdenum production was lower due to a shut-down of the properties of the Climax Molybdeum Company, a division of American Metals Climax, in Lake County pending settlement of a strike between the union and the company. Uranium and vanadium development work continued and many new discoveries were recorded in Colorado during 1958. Increased beryllium activity was noted in Larimer County with the construction of two concentrating plants in the Loveland area and increased development and exploration work in the Crystal Mountain area near Estes Park.

In addition to the four Union Carbide Nuclear Corporation plants located at Rifle, Uravan, Slick Rock and Maybell, the Vanadium Corporation of America plant at Durango, the Gunnison Mining Company plant at Gunnison, and the Climax Uranium Company plant at Grand Junction, a new uranium reduction plant using the carbonate leach process was erected at Canon City by the Cotter Corporation. The Vanadium Corporation of America closed their Naturita plant at the end of 1957 and moved part of the equipment from that mill to their Durango plant which was operated on an increased tonnage during 1958. With this new milling capacity in Colorado and additional ore bodies discovered and developed on the Colorado Plateau, as well as new ore bodies opened on the Front Range, Colorado will continue to hold its place in the production of uranium. Significant new uranium deposits were developed in the Tallahassee district west of Canon City and ore from these deposits was shipped to the Gunnison mill.

Declining base metal prices were responsible for keeping several of the State's former large base metal operations closed during the year. For a time during 1958 there were no metal mines operating in the Leadville district, a condition which has not existed since mining operations started in that area. Only two of the State's larger base and precious metal mining properties remained open the entire year and these were the New Jersey Zinc Company's Eagle operations and the Idarado Mining Company's Pandora property. Both of these companies deserve considerable credit for the efficiency of their operations in being able to maintain an operating schedule under adverse conditions. Likewise, the Golden Cycle properties in the Victor-Cripple Creek area have operated with an efficiency that enables them to continue production in the face of mounting costs with a stationary gold price.

American Metal Climax's Climax Molybdenum operations at Climax, Colorado, the largest producers of molybdenum in the world from the largest underground mine in the world, succeeded in developing molybdenum deposits at greater depth during the year. They have started sinking an eighteen-foot circular shaft below the Storke level from which further development work will be done. Their by-products plant has been replaced with a new installation and, after their two and one-half months' strike, operations were resumed and brought up to a normal daily capacity by the end of the year.

The principal producing districts in the State of gold, silver, copper, lead and zinc were:

Eagle County San Miguel County Mineral County Teller County

The leading producers of gold, silver, copper, lead, zinc and molybdenum were:

Cripple Creek, Colorado

SILVER Idarado Mining Company, Ouray and San

Miguel Counties, Ouray, Colorado

COPPER Idarado Mining Company, Ouray and San

Miguel Counties, Ouray, Colorado

LEAD Idarado Mining Company, Ouray and San

Miguel Counties, Ouray, Colorado

ZINC Empire Zinc Company, Eagle County

Gilman, Colorado

MOLYBDENUM Climax Molybdenum Division, American

Metals Climax, Climax, Colorado

The average prices of the above mentioned metals were: Gold, \$35.00 per ounce; silver, \$0.89044 per ounce; copper, \$0.25164 per pound; molybdenum, \$1.215 per pound; lead, \$0.12109 per pound; zinc, \$0.10309 per pound.

Employment in the mineral industry in Colorado in 1958, although lower than the previous year, did not reflect the widespread inactivity in base and precious metals. This was due to the fact that miners who were laid off by the closing of some of the larger operations were immediately absorbed by small leases and by reclamation tunnel contractors who were active during the year. Blue River Constructors, contractors on the Harold D. Roberts Tunnel between Dillon and Grant, Colorado Constructors, contractors on the Moffat Water Tunnel, Michigan Sewer Constructors, contractors on the Vasquez and Jones Pass Water Tunnels, and the Mountain States Constructors, contractors on the Williams Fork Dam, were responsible for the employment of many miners during the year.

Production of crude oil in Colorado for 1958 was 48,736,368 barrels, a drop of 6,245,932 barrels from 1957. Gas production showed an increase in 1958 with a total production of 134.-208,520 thousand cubic feet. The drop in oil production was due to a reduced demand for crude oil during the last half of the year. Petroleum production continued to hold first place in Colorado mineral output and Rio Blanco County remained the largest producer in the State, despite a 10% production drop. Morgan County remained second place and Washington County dropped to third place with a production of 6,852,619 barrels of oil. Rangely Weber field was first in State production with the Adena field in Morgan County second. Exploration work continued in all four corners of the State and the success ratio was about one in ten. New discoveries were made in the Paradox basin in Montezuma County and in southeastern Colorado along the Las Animas arch. Many new wells were completed in northeastern and northwestern Colorado and new fields were discovered.

The Union Oil Company completed their experimental work on their oil shale property on Parachute Creek in Garfield County. Oil shale mining procedures were developed and successful retort methods were improved. Both the Union Oil Company plant and the United States Bureau of Mines property in Garfield County are on a standby basis for future petroleum production from oil shale.

Production figures given in this report are as accurate as possible at this early date. They have been compared with the preliminary report of the United States Bureau of Mines and although some variations appear we believe that there will be no material change in the final figures. The figures quoted are based on total gross production multiplied by the average price of the mineral during the year. They are intended to show an indication of the production in the various counties and in the State and cannot be used as a guide for taxation or as final production figures. Petroleum and gas production is received from the annual report of the Colorado Oil and

Gas Conservation Commission and the dollar value is calculated by this office. Metallic and non-metallic mineral production figures are received directly from the operator and in some cases where these reports are incomplete an estimate from the inspector's report is used.

Production of Metals, Non-Metallics, Petroleum, 1958

Uranium	30,472,019 12,019,557 9,948,453 3,568,174 2,584,546 1,673,196
Total	\$109,086,318
Cement Sand and Gravel Fluorspar Limestone Clay Miscellaneous (Minerals wnich cannot be separated for production value) Stone Feldspar Gypsum Pumicite, Scoria, etc. Bog Iron Gem Stones Rare Earths Perlite, Sulphur, etc.	Non-Metallics .\$ 19,142,962 14,282,015 3,126,768 2,337,195 1,716,635 1,092,923 430,545 273,685 185,000 63,481 30,000 15,600 5,313 5,851
Total	\$ 42,707,973
Crude Oil Gas (All classes, well head value) Total	Petroleum \$144,747,010 17,424,409
Total	9102,111,110

Metals	Recapitulation \$109,086,318
Non-Metallics Oil and Gas	42,707,973
TOTAL MINERAL PRODUCTION	\$313.965.710

County Activity and Production

ADAMS (1)

Oil production in Adams County was steady during 1958 with an average number of completions and dry holes. Sand and gravel production in the county came principally from the Brannan Sand & Gravel Company's three pits and from the Cooley Sand & Gravel Company's pits on Lowell Boulevard and in Arapahoe County. Some gold and silver production was reported from gravel pit operations.

ARCHULETA (4)

Oil production in Archuleta County remained steady in 1958 with little change from 1957. The Oriental Refining Company, operators of Gramps Field in the southern part of the county, sold their interests to the Flank Oil Company of Billings, Montana, in June of 1958. The Flank Oil Company is a subsidiary of Asmara Oil Corporation, Ltd., of Calgary, Canada. Some new wells were completed and some others were abandoned with a normal amount of wildcat activity.

BACA (2)

Garrizo Enterprises Incorporated are moving a mill from Gilpin County to their Locklin copper property located on Garrizo Creek in southwest Baca County. The mine is developed through an 850-foot tunnel which penetrates copper ores.

BENT (2)

Continued oil exploration and drilling in Bent County were responsible for a slight increase in production during 1958. Several new wells were completed, which indicates that production will continue to advance in the county.

BOULDER (1)

Boulder County's mining activity practically ceased in 1958 as far as metallic mineral production was concerned. With the expiration of the government tungsten-buying program late in 1956, most of the county's tungsten mines were closed. Some activity was noted in gold and silver exploration and several properties were active in development of uranium ore. Fluorspar production remained steady in General Chemical Division's Burlington Mine, and in Harry M. Williamson's

Emmett Mine. Fluorspar mills were operated by Ozark-Mahoning Company at Jamestown and by General Chemical Division at Valmont. The LaSalle Mining Company, under the direction of Mat Rowe and Cliff Doyle, succeeded in developing a producing uranium property near Jamestown. All stone quarries in the county were active during the year and these properties maintained steady production of cut stone and flagstone for building purposes. The Wah Chang Corporation operated the Marion Mill on Sugar Loaf Road, processing thorite ore from the Canon City area.

CHAFFEE (3)

In 1954, 1955 and 1956 the Colorado Bureau of Mines reported gypsum production from Chaffee County. This was in error as the reported production came from Fremont County. During 1958 Chaffee County continued to produce small amounts of a wide variety of minerals. The Monarch Lime Quarry, operated by the Colorado Fuel & Iron Corporation, was active all year and some improvements were installed. The Antero Refining Company developed their beryllium and rare earth properties. The M & S and the Homestake Mines shipped feldspar ore to the Western Feldspar Mill near Salida. The Salida Granite Company produced granite blocks for the building and memorial trades. Feldspar production remained steady from the Western Feldspar Milling Company.

CLEAR CREEK (1)

Significant events in Clear Creek County's mining activities during 1958 were the holing through or completion of the Vasquez Water Tunnel on February 26, and the completion on September 16 of the 1,600-foot ventilation hole from the surface to underground workings of the Big Five Tunnel. Completion of the Vasquez Tunnel will insure more water for the Denver area; and the ventilation hole to the Big Five Tunnel will open the way for further development of reported mineral deposits in Clear Creek County. The Jackpot Oil Company purchased a controlling interest in the Bald Eagle Mine and the development work which followed was promising. Some work was done on the Lucania Tunnel located on Fall River. The Bride and Fourth of July Tunnels were operated by Komo Mines, Inc. Activity in the county was steady on development work, although production was not equal to 1957 because of lower base-metal prices. Forty-four separate mining, milling and placer operations were reported in Clear Creek County during 1958, most of which were doing development and exploration work. Placers were operated by Steve Papp and Alvin C. Amrheim on the Frank's Placer and Texaco Placer respectively.

CONEJOS (3)

Some turquoise from the King Turquoise Dump was pro-

duced and used in the manufacture of costume jewelry. Steady production from the Great Lakes Carbon Company's perlite plant at Antonito was reported. Perlite ore for processing was shipped in from New Mexico.

COSTILLA (3)

The Mesita Hill quarry and crushing plant, operated by the Colorado Aggregate Company, Inc., was active all year, producing volcanic scoria for the manufacture of cinder block and roofing. There was no other mining activity reported in Costilla County.

CUSTER (2)

Activities at the Great Lakes Carbon Corporation were suspended during the year on their Rosita perlite property, and late in 1958 Persolite Products, Inc., took over the quarry. They planned to resume operations and process the perlite ore at the former Great Lakes Carbon Corporation's plant located at Florence. Flexmore, Inc., have started construction of a perlite plant near Silver Cliff and some production was reported. The Crestone Company has been conducting development operations on a reported uranium deposit in the Crestone Needles area at an altitude above 11,000 feet. Thorium development and production were reported from the Westcliffe area at the Anna Lee property operated by the Gendev Corporation.

DENVER (1)

Three mineral processing plants operated in Denver County during 1958. They were the International Minerals & Chemical Corporation's feldspar processing plant, the General Chemical Division of the Allied Chemical & Dye Corporation's sulphuric acid plant, and the Globe Smelter operated by the American Smelting & Refining Company. Although some gold was recovered from gravel plant excavations, the amount was not recorded. Many mining and oil companies operating in Colorado have their offices in Denver.

DOLORES (4)

Because of the low base metal prices and an unsteady metal market, operations at the Rico Argentine properties were confined to the production of iron pyrites for their sulphuric acid plant. There was no lead, zinc, copper, silver, or gold production reported in 1958 from this property. Some small leases were active on development and assessment work. However, production for Dolores County in base and precious metals was lower than it has been for many years. Some uranium production was recorded from mines along the Dolores River and in the Dunton area, and uranium development was generally active. Some small gold production was reported from the St. Louis claim operated by Myron Jones. It is reported that Rico Argentine will start lead-zinc milling opera-

tions early in January of 1959 on ore from the Mountain Springs and St. Louis Tunnels.

DOUGLAS (2)

Limestone, silica sand, and clay were the major products from the mining industry in Douglas County. All three minerals were produced from the Helmer pits. Clay was produced from the Hogback, Ringenberg, and Stevens Ranch clay mines. These properties are located in the Castle Rock and Littleton areas. Some uranium development work was done in the county.

EAGLE (3)

The Empire Zinc Company maintained a steady operation at their Eagle Mine and Mill located at Gilman, Colorado, in spite of declining lead, zinc and copper prices during most of the year. This company remained one of the largest producers of zinc in the State and development work was continued throughout the year. Pumice and volcanic cinders were produced at the Roaring Fork Quarry and the Dotsero Quarry by the Ideal Lava Products Company and E. H. Bone, respectively. Some uranium exploration work was conducted in the Vail Pass area.

EL PASO (2)

The Castle Concrete Company operated their Castle Quarry, located five miles west of Colorado Springs, and produced concrete aggregate all during the year. The Lennox Breed Quarry, operated by Colorado Materials Company, continued their record production of concrete aggregate. The Atomic Minerals Corporation reported a small production of thorium ore from the Twenty-One Mine on the Corley Mountain Highway.

FREMONT (2)

Cotter Corporation's mill, located three and a half miles south of Canon City, started processing uranium ores from the Front Range in April of 1958. The mill has a reported capacity of seventy-two tons per day and application has been made to the Atomic Energy Commission to increase this tonnage to two hundred tons per day. Limestone and cement, produced at the Portland Quarry, operated by the Ideal Cement Company, was the major mineral product of the county in 1958. Other county products include dolomite, travertine, feldspar, mica, beryl, quartz, marble, sand, and gravel. The Empire Zinc Company's sintering plant was closed for a time during the year but resumed operations during the latter part of 1958. Gypsum was mined at the Coaldale Quarry by Fibreboard Paper Products Company and the product was used in the manufacture of wallboard. Dolomite was mined by the Colorado Fuel & Iron Works and shipped to their Pueblo plant

for flux. Uranium exploration and development continued in the Tallahassee district and considerable production was reported. Hi-Lo Minerals Corporation are constructing a mica processing plant near Howard, Colorado, and will start operations in May of 1959. Colonna & Company of Colorado, Inc., operated several small quarries in the county, as well as their crushing plant located in Canon City. Ganister was produced for Colorado Fuel & Iron Corporation by Sturbaum & Company and Laclede-Christy produced silica rock for their firebrick plant at Canon City.

GARFIELD (3)

Considerable exploration, development, and experimental work was done by the Union Oil Company at their oil shale property located on Parachute Creek. Mine methods and retort procedures were tested until August of this year when operations were temporarily closed down. The new uranium and vanadium reduction plant of the Union Carbide Nuclear Company started operations in January of 1958 on a reported tonnage in excess of 1,000 tons per day. Many plant problems were overcome during the year and eventually this plant will be one of the largest uranium mills in the State. Frank H. Norberg operated the Glenwood Springs Lime Quarry and Crushing Plant intermittently during the year on a reduced tonnage basis. The United States Bureau of Mines' Oil Shale Mine and Plant were maintained on a standby basis for future development work. Oil activity in the county continued steady and mineral prospecting indicated increased future mining activity in the county.

GILPIN (1)

Although Gilpin County's mineral production fell off during the year, many small properties were active on exploration and development work. The production loss this year can be traced directly to low metal prices and decreased interest in mining activity is also due to the lower base metal prices. Operations at the Glory Hole and Glory Hole Mill were steady during the year on gold development and processing. The Pittsburgh Mine, operated by Pittsburgh-Notaway Mines, Inc., performed development and rehabilitation work. Some development work was done at the Boodle property by William K. Guthrie. Work on the Moffat Water Tunnel was completed early in the year when slabbing and concreting were finished and the tunnel made ready for use. Several tourist mines in the county were open during the summer months, and weekend placer mining was evident along Clear Creek when weather permitted.

GRAND (3)

The Williams Fork Dam being constructed for the Denver

Water Board by the Mountain States Construction Company reportedly will be completed by the end of 1958. The dam was raised an additional one hundred feet to accommodate much larger water storage behind the dam. The Vasquez Tunnel was completed during the year and lining it with concrete should be completed by January 1, 1959. The Amis Construction Company worked during the summer months on road construction over Rabbit Ears Pass. Some manganese development was reported in the northwestern part of the county.

GUNNISON (3 & 4)

Base metal mining in Gunnison County was confined to exploration and development work due to a continual fall in base metal prices in 1958. The Keystone property, operated by the American Smelting and Refining Company, remained closed except for development work. Other properties in the Crested Butte area did some development, but no production was recorded. The Pinnacle Exploration Company located new uranium bodies in the Marshall Pass area on Indian Creek. Some beryl was produced by Hancock & Arendell from their Green Hawk Mine on Alder Creek. Development continued for most of the year on the United States Lithium Company's Lepidolite No. 2 Claim. The Gunnison Mining Company operated their new mill, which is located at Gunnison, all year on uranium ores from their Los Ochos property in Saguache County, and on ores from the Tallahassee district in Fremont County. Some uranium prospecting and developing were done in Gunnison County in 1958.

HINSDALE (4)

Prospecting and exploration work for uranium ore was conducted by the Gunnison Mining Company on their Nellie Creek property. Other development operations were conducted by K. C. Knapp on the Pride of America vein and by Williams and Long on the Resorgimento property. There was no production listed from Hinsdale County. Low metal prices and high cost of transportation have a direct effect on Hinsdale County's mining activity.

JACKSON (3)

The fluorspar operation of Ozark-Mahoning Company at their 200-level at Northgate No. 2 Mine was steady in 1958 with production ranging from 6,000 to 9,000 tons per month. Ore was treated and refined into acid and metallurgical grade fluorspar at their mill located three miles north of Cowdrey. Oil activity and production from the Battleship field, north and south McCallum fields, and the Canadian River field remained steady during the year. Some copper exploration work was done during the summer months.

JEFFERSON (1)

Mineral production in Jefferson County was strong during 1958 in both metallic and non-metallic production. Sand and gravel continued to be the largest product in dollar value, with clay, uranium, stone, and feldspar following in order. The Brannan Sand & Gravel Company and the Rio Grande Sand & Gravel Company continued to supply building aggregate for construction and highway surfacing. The Robinson Brick & Tile Company, Denver Fire Clay Company, George W. Parfet Estate, and the Lakewood Brick & Tile Company were the predominate clay producers from their mines along the hogback. The Denver-Golden Oil & Uranium Company operated their Schwartzwalder Mine steadily all year on increased uranium tonnage, which they shipped to the new Cotter Corporation mill at Canon City. Feldspar production from the South Platte River Canyon fell off materially toward the end of the year. Beryl Ores, Inc., processed beryl and mica ores at their plant near Arvada, and filter rock was mined at the Table Mountain pit by the Sterling Contracting Company.

LAKE (3)

Mineral production in Lake County was materially hampered by falling metal prices, which virtually closed all base metal mines in the county during the year, and by a strike at the Climax Molybdenum Company which closed their mining property from July 21 to October 9. However, Climax was back into full production by the end of the year and they are continuing the sinking of their eighteen-foot circular shaft from the Storke Level. Their new by-products plant, which will materially aid by-product recovery of pyrites, tin and tungsten, was completed during the year. The Arkansas Valley plant of the American Smelting & Refining Company operated on reduced tonnage all year from mines in the Rocky Mountain area, as well as on ore from foreign countries. Considerable headway was made in cleaning up caves in the Busk-Ivanhoe Water Tunnel, and this project should be completed early in 1959. C. Ryan & Son operated the gravel plant for the Climax Molybdenum Company all year. For a time during the year there were no mines operating in the Leadville district, a condition which has not been recorded since mining began in the area.

LA PLATA (4)

Mineral activity in La Plata County during 1958 has increased over 1957. With the closing of the Vanadium Corporation of America's plant at Naturita, additional tonnage has been added to the Durango plant and new installations of equipment were made. Stewart Brothers conducted development and exploration work on the Brawner Tunnel. E. M. Myers developed silver-gold ore at the Lady Eleanor Mine.

Some activity was reported at the Mary Alice, Muldoon, and Rosnite Mines where development was conducted for base metals and gold and silver ores. Considerable oil and gas activity prevailed in the Red Mesa, Ignacio and Bayfield areas with additional drilling by Consolidated Oil & Gas, Inc., and Occidental Petroleum Corporation. Many new gas wells were completed with some increase in oil production. The Kennecott Copper Corporation filed claims covering nearly 600 acres of possible copper-producing ground and this transaction could well be the beginning of a new industry in the county.

LARIMER (1)

Sixteen stone quarries were active in Larimer County in 1958, producing flagstone, cut stone, and crushed stone which are used in the building trade in the Rocky Mountain area. In addition to this activity, beryllium development and production in the Crystal Mountain area were greatly increased. The American Beryllium Company's mill located near Masonville was completed and some beryl concentrate was produced. One other beryllium mill was under construction and slated for completion by the end of the year. This was the Mineral Concentrates Mill and Chemical Plant at Loveland. Norberg Construction Company operated the Rex Limestone Quarry for the Holly Sugar Company all year. The Ideal Cement Company operated the Boettcher Quarry on an increased tonnage during the year. Uranium development and prospecting were steady with a reported shipment from the Copper King Mine in the Prairie Divide region. In general, mining activity in Larimer County was on the increase. Oil production and development continued to expand in the eastern part of the county. Sand and gravel production remained steady.

LAS ANIMAS (2)

Clay mining in the Santa Fe Mine was in progress all year on a restricted tonnage basis. The clay was shipped to the Pueblo plant of the Standard Fire Brick Company. Oil well drilling and exploration were continued in the western part of the county.

LOGAN (1)

For the second consecutive year Logan County showed a decline in oil production with 771,509 barrels less than in 1957. With a production of 5,746,294 barrels in 1958 the county maintained fourth place in State petroleum production. Natural gas production also declined from the previous year.

MESA (4)

Mesa County continued to hold third place in the production of uranium in 1958 in spite of the tonnage cutback at the Climax Uranium plant located in Grand Junction. Many small

lessors were required to locate other buyers for their ore as the Climax mill, after the cutback, processed mostly its own ore. Activity in this county, as well as other Colorado counties, was curtailed due to the Atomic Energy Commission's announcement in October of 1957 that cutbacks would be in effect and few new mills would be constructed. Prospecting leveled off some but production continued to rise above the 1957 production figures. The Atomic Energy Commission and its subcontractors were active all year in exploration and ore-purchasing programs. There was considerable access road construction in the county and oil well activity reported a measure of success. Work progressed on the Vega Dam and Water Tunnel east of Colbran under contract to C. F. Lytle, Inc. Access roads and small earthen dams were constructed east of Colbran by Wallace Beard.

MINERAL (3)

Production of rare and base metals in Mineral County dropped considerably in 1958 when the Emperius Mining Company at Creede suspended operations in June due to falling metal prices. This property, including the Commodore and Amethyst Mines and the Creede Mill, started operations again late in the year and were nearing normal production by January of 1959. Other active properties were the Holy Moses Mine operated by the Sublet Mining Company, the Monon Mine operated by the Monon Mining & Leasing Company, the Outlet Tunnel operated by the Outlet Mining Company, and the S & S Mill operated by the S & S Milling Company. Low metal prices have created operating hardships in this county.

MOFFAT (3)

Petroleum from the Hiawatha Dome, Powder Wash, Isles Dome, Maudlin Gulch, Thornburg, and the Elk Springs fields was the major commodity produced in Moffat County during 1958. New petroleum exploration and development continued and several new wildcat wells were completed. Of importance to the county was uranium production from the Trace Elements Corporation's Marge Pit. This production was in excess of 1,000 tons per day and was treated at the Maybell Mill. Trace Elements Corporation is a subsidiary of the Union Carbide Nuclear Company. Considerable prospecting and development work on uranium ore was done by the Pioneer Exploration Company and the Buffalo Mining Company of Craig. The Maybell uranium deposits are mined by the open pit method and are reported to be the largest in the State.

MONTEZUMA (4)

Petroleum activity in Montezuma County reached a new high in 1958 with increased exploration and production from the Aneth field, across the border in Utah. Many exploration

wells were drilled with a fair ratio of completions. A large number of gas wells were brought in and many drilling companies maintained offices and warehouses in Cortez. A favorable oil showing was encountered at the Ellis No. 1, south of Mancos, and some petroleum production was reported from this area. Moderate uranium exploration and development continued south of Dove Creek in Cross Canyon with some uranium production reported. Development activity continued at the Gold Dollar and Red Arrow properties on the East Mancos River.

MONTROSE (4)

In excess of 215 separate uranium operations were inspected in Montrose County in 1958. The larger part of these mines was in production, which justified the county's claim of "first in uranium production." In spite of uncertain future government support, many new deposits were opened and considerable exploration work was accomplished with encouraging results. Some deposits were worked out, including the Shattuck-Denn Mine on Club Mesa. The Vanadium Corporation of America's Naturita plant was closed on January 1, and local ores were shipped to their Durango mill and other plants in the area. The Union Carbide Nuclear Corporation mill at Uravan made continued improvement in their flowsheet and milling processes, and tonnage treated during the year was at an all-time high. New deposits were opened in Monogram Mesa, Bull Canyon, and Gypsum Valley, and in general throughout the entire uranium belt. Most uranium development in Montrose County has centered around deeper-lying deposits located under the numerous mesas in the area.

MORGAN (1)

Morgan County climbed to second place in petroleum production in 1958 with a reported 7,305,334 barrels. There was an increase over last year in the number of active fields with a total of thirty-seven, Adena field remaining the second largest producer in the State. Gas production was up over last year with a dollar value production of \$1,421,991 and exploration activity was steady with an average number of completions.

OURAY (4)

With twenty-three operations listed in 1958, Ouray County showed an increase in activity over 1957. Many of these operations were former producers before they were closed due to falling metal prices. The resumption of mining activity indicates more confidence in the area. The Treasury Tunnel, operated by the Idarado Mining Company, was active all year. However, all ore from the Ouray County side was milled at their Pandora Mill located near Telluride. The Diamond Jack Mining Company was active in development work at the

Greyhound Group. The Mayflower Mining Company did development work on the Mountain King property, and milling operations continued at the Rolling J Mill south of Ouray.

PARK (2)

Many of Park County's producing mines were idle in 1958 due to low base metal prices. The Hilltop, operated by the Leadville Lead Corporation, worked all year and produced shipments of gold-silver-lead-zinc ores. Although slightly less than was produced in 1957, beryllium production from the Boomer Mine, located in Badger Flats, was none the less significant. The Alma Placer, located at Alma, operated during the summer months. New uranium claims were located in the county in 1958, which indicates an increase of activity in the exploration of this mineral. Blue River Constructors advanced the heading of the Harold D. Roberts Water Tunnel beyond the 40,000-foot station. This tunnel, when completed, will bring water from the Blue River at Dillon to the South Platte at Grant, Colorado.

PITKIN (3)

This once highly productive county in precious and base metals reported little or no activity in 1958. A small shipment of uranium ore was made from the Lookout Mountain area just above Lenado by James S. Dodge. Other uranium prospecting and development was noted, with some manganese exploration in the Snowmass area.

PUEBLO (2)

The Meadow No. 5 and Stone City Nos. 1, 2, 3, 5, and 6 operated by General Refractories Company, the Nellie Helen Clay Mine operated by Arthur Wands, and the Rock Creek Clay Mines operated by the Freeman Fire Brick Company, were active in 1958. The Pueblo Mica Grinding Plant, operated by International Minerals & Chemical Company, was in operation all year as were several sand and gravel plants in Pueblo County. General Refractories operated the Chamblin Clay Mine as well as their properties in the Rock Creek district. Cliff & Creek Uranium Company conducted development and exploration work on their Kathryn property south of Fort Carson.

RIO BLANCO (3)

Rio Blanco County maintained its first place in oil production in Colorado from Rangely Field which has been unitized and is operated by the California Company. New wells were drilled in the Meeker area, which added production to the county, and a considerable number of wildcat wells were completed. Four uranium properties, the Butterfly Pit, Burrell No. 3, Coal Creek No. 1, and the Last Day Mines, were active.

Some uranium production was listed from Rio Blanco County in 1958.

RIO GRANDE (3)

Considerable oil exploration was evident in Rio Grande County during 1958 with several crews doing seismograph work. Oil leases were being secured by the Tennessee Gas Transmission Company, the Texas Company, Phillips Petroleum Company, Skelly Oil Company, and others, which indicated expanded future exploration. General Minerals Corporation continued its diamond drilling program for minerals in the Summitville area.

ROUTT (3)

A new oil discovery on Trout Creek by the Tennessee Gas Transmission Company stimulated oil activity in this county during the year. Cabeen Exploration Company, located fourteen miles west of Steamboat Springs, had several producing wells, and a success ratio of 75% has been reported on their new wells. The McCoy Aggregate Company produced steady amounts of volcanic ash at their McCoy Cinder Pit which is located four miles northeast of McCoy.

SAN JUAN (4)

Rehabilitation of the 750-ton Central Mill (formerly the Shenandoah-Dives Mill) owned by Marcy-Shenandoah Mining Company, continued throughout the year. This plant will handle custom ores from the district as well as ore from the company-owned mines. The Pride Mill, owned by the Argyle Mining & Milling Corporation, operated at various times during the year on custom ores and on ores from their own mines. Several other companies, including the Denver-Golden Oil & Uranium Company, the Gaddis Mining Company, Frank Richardson, and others were active on development work at their properties in the county. Some work was done on a new portal for the Mighty Monarch Mine by the Silverton Mining Company. Continued development activity promises increased production from this one-time large producing county.

SAN MIGUEL (4)

San Miguel County's mineral activity was steady during the year with continued production in uranium, precious metals, and base metals. The Idarado Mining Company operated their Pandora mining property and mill located near Telluride all year. In spite of falling metal prices, development work was maintained and property improvements made, which will insure maximum production on short notice. The Union Carbide Nuclear Company started the operation of their upgrading plant at Slick Rock which materially increased tonnages in the area. New uranium discoveries were developed

in the Slick Rock and Horseshoe Bend areas. Additional claims were located in the county in spite of the Atomic Energy Commission's announcement of a cutback in their purchase program. Some bog iron was produced for paint pigment from Harry K. Williamson's pit at Ophir which was operated by Boyd Robinson. Oil drilling activity increased in the southern and western ends of the county with drilling operations being conducted by Continental Oil Company and the Union Oil Company.

SUMMIT (3)

The Knight Mining Corporation, operators of the New York Mine, was granted a loan from Defense Minerals Exploration Administration for exploration work on lead and zinc ores. Exploration work was done at other mines which include the Wellington, Shoe Basin, St. John, Jumbo, Big 4, and Alliance. This exploration work was reported as successful. Blue River Constructors, contractors for the Denver Water Board, pushed tunneling work both east and west from the bottom of the Montezuma Shaft, and also made record progress on the Dillon entry of the Harold D. Roberts Tunnel. This tunneling project should be completed before the end of 1959, and when lined with concrete, will deliver water from the Blue River to the South Platte River. C. Ryan & Son operated the aggregate pit for the Climax Molybdenum Company.

TELLER (2)

Mining properties of the Golden Cycle Corporation, United Gold Mines, and the Cresson Consolidated Gold Mining & Milling Company which operated and produced during the year were the Ajax, Cameron, Cresson, and Deadwood Mines. The Strong Mine, operated by Front Range Mines, Inc., closed in August of this year. The Carlton Mill, operated by the Golden Cycle Corporation, received gold ores from mines and dumps in the Cripple Creek-Victor district. Operations were conducted on a reduced tonnage throughout the year. Other mining operations were the Iron Clad Mine, operated by the Rampart Mines Company, the Henry Adney, operated by John Robush & Company, and the El Paso, operated by Beacon Hill Mines, Inc. Some monumental stone was shipped from the Pikes Peak Quarry, and peat moss was mined at the Alpen Meadow Bog. Doepke Mining Company, owners and operators of the International Shaft, conducted development work and produced some gold from their property during the year.

WASHINGTON (1)

Washington County maintained third place in petroleum production with 6,852,619 barrels of oil. Although this was a

drop from 1957 production, fifty-five fields were reported active. This was an increase of eight fields over last year. Gas production showed a slight increase during 1958 and exploration activity continued with a fair ratio of success.

Production by Counties, 1958

ADAMS COUNTY Area 1250 square miles 4 plants, oil wells—90 men	* BRI	GHTON
Gold Silver		11,500 42
Total	\$	11,542
Sand and gravel	\$	388,923
Petroleum		2,315,448 134,959
Total	\$	2,450,407
TOTAL PRODUCTION FOR COUNTY	\$	2,850,872
ARCHULETA COUNTY * PAG Area 1364 square miles Gravel plant, oil wells—60 men	OSA SI	PRINGS
Sand and gravel		71,875
Petroleum Gas		351,167 41
Total	\$	351,208
TOTAL PRODUCTION FOR COUNTY	\$	423,083
BACA COUNTY Area 2565 square miles 1 mine, 1 plant, oil wells—58 men	SPRIN(GFIELD
Sand and gravel		82,937
Petroleum Gas		588 51,362
Total	\$	51,950
TOTAL PRODUCTION FOR COUNTY	\$	134,887
BENT COUNTY Area 1543 square miles Gravel plant, oil wells—40 men	LAS A	NIMAS
Sand and gravel	\$	36,457
Petroleum Gas		3,362 4,591
Total	\$	7,953
TOTAL PRODUCTION FOR COUNTY	\$	44,410

BOULDER	* B(DULDER
Area 758 square miles 16 mines, 15 quarries, plants, oil wells—318 men Gold Silver Lead		200 3,465 1,177
Total	\$	4,842
Sand and gravel Fluorspar Building and other stone Clays	· · · · · · · · · · · · · · · · · · ·	1,133,019 1,409,102 75,134 37,500
Total	\$	2,654,755
Petroleum	\$	7,455
TOTAL PRODUCTION FOR COUNTY	\$	2,667,052
CHAFFEE COUNTY	*	SALIDA
Area 1040 square miles 7 mines, 3 quarries, 4 plants—100 men Silver Lead Manganese		1,000 5,000 160
Total	\$	6,160
Sand and gravel Limestone Feldspar, mica, etc.		82,966 921,711 271,261
Total	\$	1,275,938
TOTAL PRODUCTION FOR COUNTY	\$	1,282,098
CLEAR CREEK COUNTY * G Area 395 square miles 34 mines, 4 plants, projects—478 men	EORC	GETOWN
Gold Silver Copper Lead Beryllium		37,067 15,226 5,390 34,925 88
Total	\$	92,696
Sand and gravelFeldspar, mica, etc.		291,629 183
Total	\$	291,812
TOTAL PRODUCTION FOR COUNTY	\$	384,508

COSTILLA COUNTY Area 1220 square miles	* SAN LUIS
1 quarry, gravel plant—13 men Sand and gravel Scoria	
TOTAL PRODUCTION FOR COUNTY	\$ 108,564
CUSTER COUNTY Area 738 square miles 8 mines, 1 plant—34 men	* WESTCLIFFE
Clays Perlite Thorium	2,851
TOTAL PRODUCTION FOR COUNTY	\$ 13,493
DOLORES COUNTY Area 1029 square miles 4 mines, 1 plant, oil wells—146 men	* DOVE CREEK
Pyrite Sand and gravel	\$\ 914,078 \$\ 297,679
TOTAL PRODUCTION FOR COUNTY.	\$ 1,211,757
DOUGLAS COUNTY Area 844 square miles 6 quarries & clay mines, gravel—34 men Sand and gravel Limestone Clays Silica rock	
TOTAL PRODUCTION FOR COUNTY	
EAGLE COUNTY Area 1686 square miles 1 mine, 2 quarries, 1 plant—520 men	* EAGLE
Silver Copper Lead Zinc Pyrite	300,000 1,078,089 6,888,969
Total	\$ 8,716,858
Sand and gravel Scoria	- 0-0
Total	\$ 251,662
TOTAL PRODUCTION FOR COUNTY	\$ 8,968,520

EL PASO COUNTY * COLO Area 2159 square miles	RADO SPRINGS
2 mines, 2 quarries, gravel plant, oil wells—90 Sand and gravel Limestone Silica rock	\$ 1,122,066
TOTAL PRODUCTION FOR COUNTY	\$ 1,454,735
FREMONT COUNTY Area 1562 square miles 3 mines, 12 clay mines & quarries, 1 plant, oil	
Uranium Cement Sand and gravel Limestone Gypsum Building and other stone	\$11,799,798 97,253 730,597 68,000
Total	\$12,726,226
Petroleum	\$ 80,852
TOTAL PRODUCTION FOR COUNTY	\$12,807,078
GARFIELD COUNTY Area 3000 square miles 1 mine, 1 quarry, 2 plants, oil wells—267 men Sand and gravel Limestone Oil shale	\$ 49,421 36,133 1,081,500
Total	\$ 1,167,054
Gas	\$ 115,822
TOTAL PRODUCTION FOR COUNTY	\$ 1,282,876
GILPIN COUNTY Area 149 square miles 26 mines, 3 plants, projects—219 men	CENTRAL CITY
Gold Silver Copper	\$ 1,478 1,490 327
Total	\$ 3,295
Sand and gravel Peat	6,744 6,260
Total	\$ 13,004
TOTAL PRODUCTION FOR COUNTY	\$ 16,299

GUNNISON COUNTY Area 3243 square miles 19 mines, 2 plants, projects—232 men Uranium	* GUNNISON
Sand and gravel	\$ 124,294
TOTAL PRODUCTION FOR COUNTY	\$ 124,294
JACKSON COUNTY Area 1628 square miles 4 mines, 1 plant, oil wells—181 men	* WALDEN
Sand and gravelFluorspar	
Total	\$ 1,729,255
Petroleum Gas	
Total	\$ 6,794,187
TOTAL PRODUCTION FOR COUNTY	\$ 8,523,442
JEFFERSON COUNTY Area 791 square miles 13 mines, 18 quarries, 4 plants—204 men Uranium	* GOLDEN
Sand and gravel Building and other stones Clays Feldspar, mica, etc.	\$ 2,392,241 18,140 631,892
Total	\$ 3,043,588
Petroleum	\$ 7,181
TOTAL PRODUCTION FOR COUNTY	\$ 3,050,769
LAKE COUNTY Area 384 square miles 6 mines, 3 plants, projects—1742 men	* LEADVILLE
Gold Silver Lead Zinc	
Molybdenum Tungsten Pyrite Tin	1,648,251 222,620
TOTAL PRODUCTION FOR COUNTY	\$32,359,651

LA PLATA COUNTY	* DURANGO
Area 1691 square miles 5 mines, 1 plant, projects, oil wells—408 me Sand and gravel	
Petroleum Gas	,
Total	\$ 2,389,872
TOTAL PRODUCTION FOR COUNTY	\$ 2,613,456
LARIMER COUNTY * F	FORT COLLINS
Area 2640 square miles 9 mines, 18 quarries, 6 plants, oil wells—170 me Beryllium	
Cement Sand and gravel Gypsum Building and other stones Mica	248,808 117,000 117,349
Total	\$ 7,826,681
Petroleum Gas	
Total	\$ 623,549
TOTAL PRODUCTION FOR COUNTY.	\$ 8,456,390
LAS ANIMAS COUNTY Area 4798 square miles Projects, oil wells—50 men	* TRINIDAD
Sand and gravel	
TOTAL PRODUCTION FOR COUNTY	\$ 181,371
LOGAN COUNTY Area 1849 square miles	* STERLING
Projects, oil wells—320 men Sand and gravel	\$ 200,000
Petroleum Gas	
Total	\$18,383,554
TOTAL PRODUCTION FOR COUNTY	\$18,583,554

MESA COUNTY Area 3334 square miles	* GRAND J	UN	CTION
69 mines, 5 plants, projects, oil wells—19 Sand and gravel		¢ 1	188,869
Gas		ф 1, \$	86,875
TOTAL PRODUCTION FOR COU	NTY	\$ 1,	
MINERAL COUNTY Area 923 square miles 5 mines, 2 plants, projects—91 men	¥	CF	REEDE
Gold			30,430 104,420 616 352,893 316,393
Total		\$	804,752
Sand and gravel		\$	67,222
TOTAL PRODUCTION FOR COUL	VTY	\$	871,974
MOFFAT COUNTY Area 4761 square miles 3 mines, 1 plant, oil wells—311 men Uranium			CRAIG
Sand and gravel			206,478
Petroleum Gas			475,515 985,888
Total		\$ 4,	461,403
TOTAL PRODUCTION FOR COUL	NTY	\$ 4,	667,881
MONTEZUMA COUNTY Area 2097 square miles 5 mines, projects, oil wells—232 men	*	CC	ORTEZ
Gold		\$	2,870 212
Total		\$	3,082
Sand and gravel	\$	3	340,037
Petroleum Gas			10,941 11,150
Total		3	22,091
TOTAL PRODUCTION FOR COUR	YTY	\$;	365,210

MONTROSE COUNTY	* MOI	NTROSE
Area 2240 square miles 212 mines, 2 plants, projects, oil wells—1156 men		
Uranium Sand and gravel Building and other stones	\$	368,460 107,400
TOTAL PRODUCTION FOR COUNTY	\$	475,860
MORGAN COUNTY * FO	ORT M	ORGAN
Area 1300 square miles 2 plants, oil wells—320 men Sand and gravel	\$	50.335
PetroleumGas	2	
Total	\$2	23,118,833
TOTAL PRODUCTION FOR COUNTY	\$2	23,169,168
OURAY COUNTY	*	OURAY
Area 504 square miles 22 mines, 1 plant, projects, oil wells—212 men Gold	••••••••••••	235,250 164,348 334,062 440,437 647,500
Total	\$	1,821,597
Sand and gravel	\$	12,495
TOTAL PRODUCTION FOR COUNTY	\$	1,834,092
PARK COUNTY Area 2178 square miles	* FA	IRPLAY
8 mines, 1 plant, projects—154 men Silver Lead Beryllium		32,148 168,504 37,500
Total	\$	238,152
Sand and gravel	\$	124,108
TOTAL PRODUCTION FOR COUNTY	\$	362,260

PUEBLO COUNTY	* F	PUEBLO
Area 2414 square miles 6 clay mines, 1 plant, projects, oil wells—72 men Sand and gravel Clays		1,118,039 217,108
TOTAL PRODUCTION FOR COUNTY	\$	1,335,147
RIO BLANCO COUNTY	* N	IEEKER
Area 3264 square miles 4 mines, projects, oil wells—574 men Uranium Vanadium Sand and gravel		
Petroleum Gas	6	9,141,686
Total	\$7	5,378,822
TOTAL PRODUCTION FOR COUNTY	\$7	5,595,304
ROUTT COUNTY * STEAMBO Area 2231 square miles 1 quarry, projects, oil wells—208 men	AT S	PRINGS
Scoria	\$	34,475
Petroleum Gas		483,914 3,269
Total	\$	487,183
TOTAL PRODUCTION FOR COUNTY	\$	521,658
Area 3146 square miles	* SAG	UACHE
12 mines, 1 quarry, 3 plants, projects—185 men Gold Silver Copper Lead Zinc Uranium		8,400 14,283 21,099 109,621 117,231
Total	\$	270,634
Turquoise	,	15,600
TOTAL PRODUCTION FOR COUNTY	\$	286,234

SAN JUAN COUNTY	* SILV	VERTON
Area 392 square miles 13 mines, 2 plants, projects—87 men Gold Silver Copper Lead Zinc TOTAL PRODUCTION FOR COUNTY		26,623 12,332 8,513 56,017 35,856
SAN MIGUEL COUNTY	* TEL	LURIDE
Area 1284 square miles 103 mines, 3 plants, projects—1243 men Gold Silver Copper Lead Zinc Uranium Vanadium		705,429 490,563 1,002,189 1,321,315 2,142,500
Total	\$	5,661,996
Sand and gravel Bog iron Total		31,942 30,000 61,942
TOTAL PRODUCTION FOR COUNTY.		5,723,938
SUMMIT COUNTY * F	BRECKE	NRIDGE
Area 616 square miles 6 mines, 2 plants, projects—563 men Gold Silver Lead Total		7 15 118 ————————————————————————————————
Sand and gravel		384,870
TOTAL PRODUCTION FOR COUNTY	-	385,010

TELLER COUNTY	* CRIPPLE CREEK
Area 555 square miles 11 mines, 1 plant, 2 quarries, projects—199 GoldSilver	\$ 1,525,192
Total	\$ 1,530,192
Building and other stones.	
Total	\$ 22,770
TOTAL PRODUCTION FOR COUN'	TY\$ 1,552,962
WASHINGTON COUNTY	* AKRON
Area 2530 square miles Oil wells—230 men Sand and gravel	\$ 155,602
Petroleum	
Total	\$20,807,857
TOTAL PRODUCTION FOR COUN	TY\$20,963,459
WELD COUNTY	* GREELEY
Area 4033 square miles Projects, oil wells—115 men Sand and gravel	\$ 252,052
PetroleumGas	
Total	\$ 6,535,777
TOTAL PRODUCTION FOR COUN	TY\$ 6,787,829
* County Seats	

Safety Awards

The following list of operators employing ten or more men have completed the entire year of 1958 without a lost-time accident and have been issued Safety Awards. Considerable improvement in safety has been shown by many of the larger operators and a great number of operations employing less than ten men completed the entire year without a lost-time accident. To the operators who did not receive an award we wish to extend our sincere appreciation for their untiring cooperation.

American Smelting & Refining Company, Globe Plant, Denver

The California Company, Rangely Gas Plant, Rangely

Climax Uranium Company, Grand Junction

Colorado Limestone Company, Howard

Colorado Materials Company, Colorado Springs

Booth Eckman, Nucla

General Chemical Division, Allied Chemical & Dye Corporation, Burlington Mine, Boulder

General Chemical Division, Allied Chemical & Dye Corporation, Valmont Plant, Boulder

Hess Drilling Company, Paradox

Ideal Cement Company, Boettcher Quarry, Fort Collins

Ideal Cement Company, Portland Quarry, Portland

International Minerals & Chemical Corporation, Pueblo

McPherson Drilling Company, Montrose

Model Mining Company, Grand Junction

New Jersey Zinc Company, Canon City

George W. Parfet Estate, Golden

Lucius Pitkin Incorporated, Grand Junction

Verne Ray, Uravan

DeVar Shumway, Grand Junction

The Texas Company, Craig

United States Atomic Energy Commission, Denver

United States Gypsum Company, Loveland

Western Feldspar Milling Company, Salida

Accidents

Fatal accidents in the mineral industry and construction projects in Colorado were reduced from twenty-two in 1957 to fourteen in 1958. Ten fatals occurred in the mining industry, four of which were on the surface and six underground. One fatal occurred in the sand and gravel industry and three fatals occurred in the oil well industry. Of these fatal accidents seven were caused by falling objects and ground, which has been the number one cause of accidents in the industry for several years. Three were caused by fall of man which has ranked second over the years. One was caused by asphyxiation, one by burns at a rig fire, one by electrocution underground and one by improper blasting procedure. The average age of the men killed in the mining industry was forty-three years, the average age in the oil industry was forty-two. The gravel pit fatality victim was fifty-three years old.

All of the fatal accidents in 1958 were avoidable and their cause was traced directly to carelessness of the individual or management along with infractions of safety rules by all parties concerned. All of these fatal accidents as well as all serious accidents were investigated by the inspectors in the various districts and complete written reports were submitted to the operators and the Bureau of Mines. Recommendations in writing were made to the operators for the correction of any condition or procedure which contributed to the accident. Accident information was compiled and distributed to all inspectors as an aid to preventing occurrence of similar accidents.

A total of 35,395,200 man-hours was worked in the industry in 1958, with a total of 1,101 lost-time accidents which resulted in the loss of 98,278 days. This includes the loss of 88,040 days due to fatal accidents and permanent partial disabilities.

The fatal accident rate per 1,000 men in the entire industry was .95 while the fatal accident rate per 1,000 men in the mining industry was 1.17, oil industry 1.07, and the sand and gravel industry 1.4. There was one lost-time accident for every 13.3 men employed in the entire minerals industry with the same ratio in the mining industry, 13.1 in the oil industry, and 13.4 in State and Federal projects.

SUMMARY OF ACCIDENTS—1958

Severity Rate Per One Million	Man-Hours	6,346.	5,473.	89.	206.	3334.	3,326.	2,777.
Frequency Rate Per One Million	Man-Hours	29.1	50.8	12.0	11.9	31.4	30.5	31.1 rmanent partial disabili
Number of	Days Lost	18,947	53,285	155	1,613	2,152	22,126	98,278 40 days due to 11 pe
Lost-Time	Injuries	87	495	21	66	202	203	the loss of 84,000 days due to 14 fatalities and 4,040 days due to 11 permanent partial disabilities.
Total	Man-Hours	Mines. Surface	2	Quarries - Clay Pits 1,740,000	Mills - Plants - Smelters 7.845,600	State & Federal Projects 6,434,400	Oil Wells 6,652,800	Totals This table includes the loss of 84,000 days d

FATAL ACCIDENTS—1958

Employed by

Name

Date

Fall of r Hit by fa Burns fr	Ace Well Service Honaker & Davis Drilling Company White River Exploration Company	8-24-58 Joe Ray Adair 11-27-58 De Loyd Stein 12-13-58 Albert J. Tullis
	OIL WELLS	
Hit by c	PLACERS Brannan Sand & Gravel Company	11-14-58 Elmer H. Tuttle
Flectroci	Lowell Thompson (Climax U.) Idarado Mining Company	9-16-58 Donald Eugene Bartlett 11- 5-58 David Krill
Crushed Imprope	Titan Mines, Inc. Orbie Oliver Warren	8-15-58 Henry Marino 9-11-58 Orbie Oliver Warren
Crushed Asphyxia	Reece & Austin Lessees Rico Argentine Mining Company	7- 8-58 George Austin 8-11-58 Thomas O. Maxey
Fall of Crushed	Idarado Mining Company Reece & Austin Lessees	3-58 Aaron M. Shideler 8-58 Richard Reece
Crushed	LaSalle Mining Company (U.C.N.C.) Shattuck Denn Mining Company	1-17-58 Levi Kilgore 3- 7-58 Casey Ralph Sheridan
	METAL MINES	

Cause of Death

Total Time Charges in Days × 1,000,000 Number of Man-Hours of Exposure

Severity Rate=

Number of Injuries × 1,000,000 Number of Man-Hours of Exposure

Frequency Rate=

Crushed under dumped bucket of waste Crushed by fall of rock Fall of man down raise Crushed by fall of rock Crushed by fall of rock Asphyxiation in old raise Crushed by fall of rock Asphyxiation in old raise Crushed by fall of rock Improper blasting procedure Electrocution underground Asphyxiation. Fall of man

it by collapsing boom

Fall of man. Derrick collapse Hit by falling object Burns from rig fire

AGENCY CAUSING ACCIDENT

	7	remporary Inj Loss of one d	
MINES, SURFACE	Fatals	or more	
Atmosphere		1	
Cables - Hose - Ropes		2	
Cars - Motors - Vehicles		2 1	
Containers		$\overset{1}{2}$	
Doors - Windows - Gates		1	
Drills - Drilling Equipment		7	
Electricity - Elec. Equipment		2	
Falls - Floor - Ice - Snow		$\bar{7}$	
Flames - Fire - Hot Substances		2	
Ladders - Manways		1	
Machinery - Tools		15	
Materials		1	
Metal Objects		26	
Rock - Ore - Ground		12	
Timber - Lumber - Poles		2	
Tracks		1	
Unclassified - Insufficient Data		1	
(TI-4-1.		<u> </u>	
Totals	2	86	88
MINES, UNDERGROUND			
Atmosphere	2	9	
Bars - Bins - Chutes	•••	8	
Cables - Hose - Ropes		17	
Cars - Motors - Vehicles		92	
Containers		2	
Drills - Drilling Equipment		28	
Dust and Particles		4	
Explosives, Loading or Firing	1	2	
Electricity - Elec. Equipment	1	22	
Falls - Floor - Ice - Snow		$\frac{22}{2}$	
Falling or Flying Objects		$\frac{2}{2}$	
Ladders - Manways	•••	6	
Machinery - Tools	•••	64	
Metal Objects		40	
Platforms - Staging - Scaffolds		6	
Premature or Delayed Blasts		$\overset{\circ}{2}$	
Rock - Ore - Ground		138	
Timber - Lumber - Poles		40	
Tracks		4	
m	_	400	407
Totals	9	488	497

AGENCY CAUSING ACCIDENT—Continued

	Fatals	Temporary Injuries Loss of one day or more
QUARRIES		
Belts - Conveyors - Pulleys Cables - Hose - Ropes Cars - Motors - Vehicles Explosives, Loading or Firing Falls - Floor - Ice - Snow		1 2 1 1
Machinery - Tools Metal Objects Rock - Ore - Ground		3 1 11
Total	-	$\overline{21}$
MILLS, PLANTS, SMELTERS		
Atmosphere Belts - Conveyors - Pulleys Cables - Hose - Ropes Cars - Motors - Vehicles Containers Chemicals Doors - Windows - Gates Drills - Drilling Equipment Dust and Particles Electricity - Elec. Equipment Falls - Floor - Ice - Snow Flames - Fire - Hot Substances Machinery - Tools Materials Metal Objects Rock - Ore - Ground		3 3 2 6 5 4 1 1 1 2 1 15 8 9 4 18 11
Total		93
OIL WELLS		
Belts - Conveyors - Pulleys Cables - Hose - Ropes Cars - Motors - Vehicles Chains - Gears - Sprockets Containers Chemicals Drills - Drilling Equipment Electricity - Elec. Equipment Falls - Floor - Ice - Snow	. 1	1 5 6 7 1 2 37 4 27

AGENCY CAUSING ACCIDENT—Continued

Machinery - Tools Metal Objects Platforms - Staging - Scaffolds Rock - Ore - Ground Timber - Lumber - Poles Tongs Unclassified - Insufficient Data		Temporary Ir Loss of one or more 16 60 4 3 3 20 1	day
Totals	3	200	203
STATE AND FEDERAL PROJECTS			
Atmosphere Bars - Bins - Chutes Belts - Conveyors - Pulleys Cables - Hose - Ropes Cars - Motors - Vehicles Chains - Gears - Sprockets Containers Chemicals Doors - Windows - Gates Drills - Drilling Equipment Dust and Particles Falls - Floor - Ice - Snow Flames - Fire - Hot Substances Ladders - Manways Machinery - Tools Materials Metal Objects Platforms - Staging - Scaffolds Premature or Delayed Blasts Rock - Ore - Ground Timber - Lumber - Poles Tracks		1 2 2 7 28 2 2 3 1 5 2 9 3 5 23 7 37 1 3 39 11 9	
Total	•••	202	

TYPE, NATURE AND SITE OF INJURY

	Temporary Injuries Loss of one day Fatals or more			
MINES, SURFACE				
Type of Injury				
Burns - Shock Caught in or between Fall on same level Fall on different level Handling Inhalation - Suffocation Striking against - Struck by Slip - Stepping on		5 9 1 8 16 1 41 7		
Totals	. 3	88	91	
Nature of Injury Foreign Bodies	2 1	7 39 21 2 1 15 6 —	94	
Site of Injury				
Eyes	. 1	13 7 24 16 32		
General	2	1	_	
Totals	3	93	96	

TYPE, NATURE AND SITE OF INJURY—Continued

MINES, UNDERGROUND	Fatals	Temporary Injuries Loss of one day Fatals or more		
Type of Injury				
Burns - Shock Caught in or between Fall on same level Fall on different level Handling Inhalation - Suffocation Striking against - Struck by Slip - Stepping on Totals	1	56 12 24 96 7 214 32 ———————————————————————————————————	 149	
Nature of Injury Foreign Bodies Cuts - Bruises - Lacerations - Puncture Strains - Sprains - Dislocations Hernia Respiratory Fractures Amputations Burns - Scalds - Shock	s 2 5	28 243 131 14 10 74 5		
Occupational Diseases Totals		506 5	 514	
Site of Injury				
Eyes Head - Face - Neck Trunk Upper Extremities Lower Extremities General Insufficient data	1 6	39 35 163 127 153 9		
Totals	8	527 5	535	

TYPE, NATURE AND SITE OF INJURY—Continued

	Fatals	Temporary Injuries Loss of one day or more
QUARRIES		
Type of Injury		
Caught in or between	•	4
Fall on different level	•	1
Handling		3
Striking against - Struck by		10
Slip - Stepping on		3
		_
Total	-	21
Nature of Injury		
Foreign Bodies	•	1
Cuts - Bruises - Lacerations - Punctures	S	10
Strains - Sprains - Dislocations		6
Fractures	•	4
		_
Total		21
Site of Injury		
Eyes		1
Head - Face - Neck		1
Trunk		4
Upper Extremities		7
Lower Extremities		8
		_
Total		21

- Fatals	Temporary Injuries Loss of one day or more
MILLS, SMELTERS, PLANTS	
Type of Injury	
Burns - Shock	7
Caught in or between	8
Fall on same level	2
Fall on different level	5
Handling	17
Inhalation - Suffocation	4
Striking against - Struck by	35
Slip - Stepping on	15
Total	93
Nature of Injury	
Foreign Bodies	8
Cuts - Bruises - Lacerations - Punctures	26
Strains - Sprains - Dislocations	25
Hernia	4
Respiratory	4
Fractures	14
Amputations	1
Burns - Scalds - Shock	11
	_
Total	93
Site of Injury	
Eyes	12
Head - Face - Neck	9
Trunk	26
Upper Extremities	21
Lower Extremities	29
General	3
Total	100

TYPE, NATURE AND SITE OF INJURY—Continued

OIL WELLS	Fatals	Temporary Injuries Loss of one day or more		
Type of Injury				
Burns - Shock Caught in or between Fall on same level		11 50 6		
Fall on different level Handling	1	10 17		
Striking against - Struck by		88 16 2		
Totals	3	200	203	
Nature of Injury				
Foreign Bodies		2		
Cuts - Bruises - Lacerations - Puncture		104 40		
Strains - Sprains - Dislocations		40		
Fractures		49		
Amputations		6		
Burns - Scalds - Shock		11		
Nature Unknown		2		
Totals	3	215	218	
Site of Injury				
Eyes		11		
Head - Face - Neck	2	27		
Trunk		35		
Upper Extremities		77		
Lower Extremities		53		
General		2		
Totals	. 3	205	208	

215

TYPE, NATURE AND SITE OF INJURY—Continued

Temporary Injuries Loss of one day Fatals or more STATE AND FEDERAL PROJECTS Type of Injury Burns - Shock 19 Caught in or between 24 Fall on same level 2 Fall on different level 5 Handling 28 Inhalation - Suffocation 1 Striking against - Struck by 114 Slip - Stepping on 10 Total 202 **Nature of Injury** Foreign Bodies 7 Cuts - Bruises - Lacerations - Punctures 109 Strains - Sprains - Dislocations 40 Hernia 2 Respiratory 1 Fractures 34 Amputations 1 Burns - Scalds - Shock 11 Occupational diseases 1 206 Total Site of Injury Eyes 9 Head - Face - Neck 15 Trunk 50 Upper Extremities 57 Lower Extremities 80 General 2 Insufficient data

Total

Men Employed—1958

Suspension of operations by several of the larger mining properties was responsible for a decrease in the number of men employed in the industry in 1958. Most of the men laid off from the larger operations remained in the industry by starting small leases, a fact which is evidenced by the increase in mining operations over 1957. In 1958 there were 961 less men employed in the industry while the number of mining operations increased by sixty-eight over 1957.

				ills, ants,						Oil	
		lines							Projects		
	No	. Men	No.	Men	No.	Men	No.	Men	Men	Men	Men
District	1 98	425	33	405	52	213	5	124	524	1,277	2,968
District	2 33	244	4	104	29	193	2	71	96	280	988
District	3 46	1,485	19	1,418	9	65	4	61	1,052	840	4,921
District	4459	3,086	15	1,342	1	5	1	54	1,009	375	5,871
Totals	636	5,240	71	3.269	91	476	12	310	2,681	2,772	14,748

TOTAL MEN EMPLOYED

!"nd	erground	Surface	Oil Wells	Totals
District 1 District 2 District 3. District 4	520 267 1,653 2,290	1,171 441 2,428 3,206	1,277 280 840 375	2,968 988 4,921 5,871
Totals	4,730	7,246	2,772	14,748

MEN EMPLOYED IN

Gold, Silver Copper, Lead, Zinc	Molybdenum	Uranium	Oil Wells	Other	Total
1,000	1,900	5,000	2,772	4,076	14,748

Inspections

A total of 1,158 complete safety inspections was made during the year by the six inspectors of the department. Although many base metal and tungsten properties were idle, an increase in other mining activities kept the average number of operations about equal to 1957. More frequent and thorough inspections were possible in Districts 1, 2 and 3, due to fewer operations in these districts. Each operation in these districts was inspected several times during the year and in District 4 each operation was inspected at least once and as many more times as time permitted and necessity required.

1958 INSPECTIONS

Made By

1958	District 1 Blake	District 2 Theobald	District 3 Doyle & Keating	District 4 Ray & Pakka	Totals
January	. 36	0	23	56	115
February		16	21	24	72
March		8	20	43	77
April	. 20	9	32	58	119
May	. 20	0	25	34	79
June	. 25	0	47	42	114
July	. 33	7	30	74	144
August	. 29	7	26	28	90
September	. 17	3	20	28	68
October	. 28	6	35	33	102
November	. 25	8	20	33	86
December	. 27	2	26	37	92
Totals	. 277	66	325	490	1,158

	(•	es Mills,					
& Plants								
		Clay	&			Oil		
	Mines	Mines	Smelters	Placers	Projects	Wells	Totals	
District 1	95	53	42	1	18	66	275	
District 2	33	21	4	1	1	13	73	
District 3	76	20	56	0	75	96	323	
District 4	420	0	17	0	18	32	487	
Totals	624	94	119	2	112	207	1,158	

Information Reports

In addition to the regular inspection reports filed with this office, 670 complete Information Reports were received from the inspectors during 1958. These Information Reports give pertinent information on individual operating properties which is compiled during the year from one or more visitations at the property. This information is on file at the Bureau of Mines office and can be reviewed by the interested public.

1958 INFORMATION REPORTS

Made By

			J		
1958	District 1 Blake	District 2 Theobald	District 3 Doyle & Keating	District 4 Ray & Pakka	Totals
January	. 2	0	23	47	72
February		0	3	48	56
March	. 1	0	0	41	42
April	. 0	0	4	43	47
May	. 9	0	1	19	29
June		13	7	51	94
July	. 10	29	6	33	78
August	. 12	2	3	14	31
September	. 5	12	16	31	64
October	. 9	3	4	24	40
November	. 16	2	2	18	38
December	. 18	9	4	48	79
Totals	110	70	73	417	670

		Quarrie &	Mills,				
	3.61		Plants &		D	Oil	m 1
	Mines	Mines	Smelters	Placers	Projects	wells	Totals
District 1	63	17	10	7	6	7	110
District 2	34	27	5	2	2	0	70
District 3	45	2	8	2	5	11	73
District 4	389	0	11	6	8	3	417
		_	_	_			
Total	531	46	34	17	21	21	670

TOTAL INSPECTIONS, PARTIAL INSPECTIONS AND INFORMATION DATA

District 1	District 2	District 3	District 4	Total
385	143	396	904	1,828

List of Operating Mines in Various Counties in Colorado—1958

OPERATING MINES IN BACA COUNTY

Product	Copper
P. O. Address	716 Main St., Springfield
	Inc.
	Milling,
Operator	Baca Mining & Milling, Inc.
e Location	Utleyville
f Min	
Name of Min	Locklin

OPERATING MINES IN BOULDER COUNTY

Copper Lead	Jead	
Silver, Lead Silver, Lead, Copper Gold, Silver, Lead Gold, Silver Gold	Gold, Silver Gold, Silver Flourspar Uranium Gold. Silver, Lead Gold. Silver, Lead	Copper Copper Gold, Silver Gold, Silver Tungsten Silver, Lead
Blue Bird Mines ————————————————————————————————————	Jonnana, Nebr. Jamestown Star Route, Boulder Box 228, Boulder Jolol W. 9th Dr., Lakewood Box 1550, Grand Junction Box 43, Boulder	nk Bldg., Boulder_akewood er
Stephenson_312 488 Wo Mo 101 & Son240	Corp	
Blue Bird Mines R. E. Clarida & W. L. Stephen H. W. Low Estate Ultex Exploration Co. Chase & Ross Harry M. Williamson & Son Smuggler View	Mountain Top Mining Co General Chemical Division, Allied Chemical & Dye Corp La Salle Mining Co Chase & Ross	William E. Brewster
Nederland	ngton)Jamestown ir Day)Jamestown ir Day)Jamestown 	Jamestown \
Blue Bird Blue Stone Lode Boulder County Tunnel Cash Dail Owen Emmett Golden Age	Golden Princess Jamestown (Burlington) La Salle No. 1 (Fair Day) Moon Mountain Squaw	Pine ShadeSun Sun Tungsten White Raven

OPERATING MINES IN CHAFFEE COUNTY

OPERATING MINES IN CLEAR CREEK COUNTY

	ad	ad			ad ad	ad		ad	ad	pe	ad,	ead alth ead ad	ad
Product	Tourist Gold, Silver, Lead Gold, Silver, Lead	Gold, Silver, Lead Beryl	Silver, Lead	Silver, Lead	Silver, Lead Gold, Silver, Lead Gold, Silver, Lead	Gold, Silver, Lead	Feldspar	Gold, Silver, Lead	Gold, Silver, Lead	Beryl Tourist Gold, Silver, Lead	Gold, Silver, Lead Gold, Silver, Lead, Copper	Gold, Silver, Lead Tourist and Health Gold, Silver, Lead Instruction Gold, Silver, Lead	Rare Earths Gold, Silver Gold, Silver, Lead Gold, Silver, Lead
P. O. Address	Box 716 Idaho Springs 308 Travel Center Bldg., Denver 2	2106 Broadway, Denver 5 _Box 15, Idaho Springs	Box 15, Idaho Springs	2550 Varrow, Denver 15 1353 Mesita Rd., Colorado Springs	Lawson Box 283, Idaho Springs c/o Frank Prince, Wilson, Kans.	812 Emporia St., Aurora Box 44, Ada, Okla.	Byergreen	Box 32, Idaho Springs	1128 Colorado Blvd., Idaho Springs	Route 1, Evergreen 2303 W. 53rd Ave., Denver 21 Idaho Springs	1727 Boulder St., Denver 11 Box 312, Idaho Springs	Box 14, Lawson Box 6, Idaho Springs Golden Idaho Springs Golden Idaho Springs Las Springs	Box 15, Idaho Springs
Operator	Alma Lincoln Mining Co. Larson, Young & Kingery Jackpot Oil Co.	Gold Coin Mining Co. The Success Mining & Exploration Co.	The Success Mining & Exploration Co.	Rhine Mackey Mines	Lynn Mines, Inc. Lynn Mines, Inc. Lynn Mines Silver Age Mining Co.	.Gold Anchor Minerals, Inc.	Joe Grover	Fall River Exploration & Mining Co.	Gilpin Uranium, Inc.	Keith Echinger Charles Seymour Kitty Clyde Leasing Co.	Contract Engineering Co.	Klopp & Weirick Lone Star Mining Co. David H. Petske Colorado School of Mines Haef Leavitt, et al. Owens & Swenson	Exploration Co. Sky Rocket Mining Furstenberg Brothe Gold Coin Mining C
Location	-Spanish Bar Virginia Canyon Virginia Canyon	Lawson Floyd Hill	Dumont	Spring Gulch Ute Creek	Lawson Canyon Circleson Gulch	Gilson GulchAlice	Beaver Brook	Virginia Canyon	Trail Creek	Bergen Park Idaho Springs	Idaho SpringsSpanish Bar	LHugo Gulch Clear Creek Spanish Bar Idaho Springs Glison Gulch Glison Gulch	Spring GulchSpanish Bar
Name of Mine	Alma Lincoln Ashland Bald Eagle	Bellvue Hudson Brandt Ranch	Capitol	Crazy Girl Tunnel Dixie	Prumond No. 4 Fourth of July Franklin	Preighter's Friend Gold Anchor	Grover	Hot Pot	Keast Tunnel	Keith King Cyrus Nos. 1 & 2 Kitty Clyde	Lake Central Project (Big 5 Tunnel) Lafayette	Lone Star No. 6 Mayflower Mamil Tunnel (Edgar) Park Side Roote Ranch	Sky RocketStanley Tunnel

Oil Shale

100 Bush St., San Francisco, Calif.

, Zine,

OPERATING MINES IN CUSTER COUNTY

Thorium Silver Silver Uranium Exploration Thorium
Colorado Springs Colorado Springs Thorium Sor 722, Cheyenne, Wyo Silver Wetmore Box 87, Westcliffe Box 24, Rosita Box 24, Rosita Box 68, Silver Cliff Lord Maren St., Vallejo, Calif. Thorium
·
Gendev Corp. S. N. N. Mining Co., Inc. Decker & Eisenhour The Crestone Co. Colley Minerals, Inc. Calico Minerals, Inc. Dr. G. J. Budd & Associates
Brush HollowGendev Corp RositaS. N. N. Mining Ophir CreekDecker & Elsen Colony CreekThe Crestone C RositaCecil F. Parson RositaCalico Minerals Silver ParkOr. G. J. Budd &
t ne Shaft
Anna Lee Big Bonnie Buckeye-Hol Crestone Gold Nugget Mary Christi

OPERATING MINES IN DOLORES COUNTY

Silver, Lead, Zinc Zinc Zinc Zinc Zinc	Gold, Lead, Zinc Lead, Silver, Zinc, Pyrites
Mining Co. Rico	Mining Co. Rico
Jones BrothersRico Argentine Mining Co.	Bico Argentine Mining Co.
Iron Clad Mountain Springs Rico	St. Louis Mine St. Louis Tunnel Rico

OPERATING MINES IN EAGLE COUNTY

Lead,	Pr
Silver,	Conn
The New Jersey Zinc CoGilman	
EagleCilman	

OPERATING MINES IN EL PASO COUNTY

440 Independence Bldg.,	Colorado Springsl'ranium	Colorado Springs Thorium
S.B. Fort Carson Cliff & Creek Uranium Co.	Corley Mtn.	Highway Inland Empire Corp.
Kathryn	Twenty-One	

OPERATING MINES IN FREMONT COUNTY

Florence	Hotel Canon, Canon City Uranium	Cit
n Co.		
Tallahassee Area V & V Construction	Tallahassee Area Glenn D. Williams	Tallahassee Area Smaller Mining Co.
Joan	Oliver	Smaller

OPERATING MINES IN GARFIELD COUNTY

- 0	
- 7	
Ċ.	
C	
Ctah Construction	
Riffe	
hale Mine	
CES	

OPERATING MINES IN GILPIN COUNTY

	Product Gold, Silver	Tourist Gold, Silver, Lead Silver, Lead, Zine Gold, Silver, Copper Gold, Silver, Lead, Gold, Silver, Lead	Zinc, Copper Zinc, Copper Tourist Gold, Silver, Copper Gold, Silver, Lead Gold, Silver, Lead Gold, Silver, Lead Gold, Silver, Copper Lodd, Silver, Lead Gold, Silver, Lead		-Tourist Silver, Lead, Gold, Silver, Lead,	Gold Gold Molybdenum	Lead Silver, Lead Gold, Silver, Lead	Beryl Gold, Silver, Lead Silver, Lead Gold, Silver, Copper Gold, Silver, Lead,	Zinc Lithium	Tranium Uranium Gold, Silver, Lead,
IN COUNTY	P. O. Address		Black Hawk Box 201, Central City Box 824 Idaho Springs Box 209, Route 1, Morrison Idaho Springs Black Hawk Route 2, Box 413, Arvada Box 67, Central City Box 305, Control City	-c/o Dowell Blake, Black	Black Hawk -c/o Dowell Blake, Black Hawk Central City	-7820 Niagara St., Derby Black Hawk	GONNISON COONTY Box 315, Gunnison Box 11, Montrose Roy 15, Objo City	Pitkin Box 576, Crested Butte Tincup Route 1, Box 186, Montrose Crested Butte	312 Walker Bank Bldg., Salt Lake City, Utah	217 Main St., Gunnison Box 87, Nucla
OFERALING MINES IN GILLIN COUNTY	Operator Silvar I and Mining Co.		33444444	Blake Brothers	Mike McNulty Blake Brothers Garrick & Ellison	Arlie E. Winn Nye-Mathews Mining	OFERALING MINES IN GONNIS Cumberland Pass Ernest E. Miller Taylor Park Roy Carpenter Cold Greek H. I. Rind	eek. H. E. Hancock & Leonard Arendell G. R. Bennett Hugh Corrigan K & Mining Co. American Sinelting & Refining Co.	ı S. Lithium Co.	Pinnacle Exploration, Inc. Keith & Andrews Standard Uranium Corp.
	Location	Figure Rawk Black Hawk Control City Perigo Boad Centrol City Centrol City Centrol City Centrol City Centrol City Control City Netwodaville	Plack Hawk Central City Lake Gulch Elk Horn Gulch Freeman Gulch Lake Gulch Lake Gulch Leavenworth	Silver Creek	Black Hawk Hughesville Silver Creek	Mosquito Gulch Jenny Lind	Cumberland P Taylor Park	East Elder Cr Baldy Mtn. Throup Hall Creek	Whiskey Gulch	lndian Creek Taylor Park Elk Basin
	Nation of Miles	Control Tanned Thindle Nis 1 & 2 Thermal Nis 1 & 3 Operand Lil Elk Valley Hayes & Wheeler Tal Cost (Glory Hole)	Little Colonel Lest Gold Mine Manmetle Micker-Stress Morning Star No Name Planer Philadelphia Pittsburgh Shuten to One Shuten to One	Three B's Group	Toll Gate Tungsten King Wegot m	White House Wilma	Albandra No. 2 Enterprise Cold Tinks	Gren Hawk High and Mighty Hot Rolk Group June Bug Keystone	Lepidolite No. 2	Tunnel Matchless Micawber

---Copper

--Walden

				COLOR
Uranium Gold, Silver, Lead, Zilver 1994 Conner	Gold, Silver, Lead	Vermiculite	Gold, Silver, Lead Silver Lead, Zinc Zinc	
Dutchman Gulch Schoffeld Bark	Spruce February Mun. Marke Hilbreth, Inc. e No. 1 Gulch Frank Hodgson & Harry Downing John Lambertson Mtn. John Lambertson	Titan OPERATING MINES IN HINSDALE COUNTY	Nellie Creek Pride of America Hansen Creek K. C. Knapp Long Lake City Resorgimento Lake City Resorgimento Lake City	OPERATING MINES IN JACKSON COUNTY

Frederick Dodge Co.

-Walden Cowdrey

Barbara Ann Ozark-Mahoning Mines OPERATING MINES IN JEFFERSON COUNTY

Idledale Foothills Mining Co. 3240 6th St., Boulder Uranium Idledale Grapevine Mining Co., Inc. Morrison Uranium Soda Lake Liranium Soda Lake Liranium Soda Lake Liranium Soda Lake Joseph W. Walsh Denver 7 Liranium Denver 7 Liranium Denver 7 Liranium L	Canyon	Soda LakeFour Corners Uranium CoMile High Center, Denver ? Ralston CreekDenver-Golden Oil &	Waterton Continental Materials Corp.
Foothills Grapevine Mann No. 1	Nare	Pallaro Lease Schwartzwalder	Seven Devils

OPERATING MINES IN LAKE COUNTY

,	5	q	d,	d
um	Gold, Silver, Lead	er, Lea	er, Lea	Gold, Silver, Lead
Jolybdenum	old, Silvold, Silv	old, Silv	old, Silv	ld, Silv
Me		Ö	55	. G
		He		
l	imax	Leadv	00	8
ax .	Twin Lakes Box 662, Climax	1th St.,	Twin Lakes	Twin Lakes
Climax	Box	- E. 1	Twi	Twi
	Co.			
num Co	Mining r, Jr.	-		ļ
folybde	Night Shaffe	astrinos	Hatel	. Hatel
Climax Molybdenum Co.	Saturday Night Mining Co. Rollo W. Shaffer, Jr.	Chrls Kastrinos	enzel A	-Denzel A. Hatch
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limax ndependence	Pass english Gulch	Mt. Elbert	Mt. Elbert	Mt. Elbert
(Timax Independ	Engl	MIT.	Mt.	Mt.
		4		-
nes	Mine	lordon Tiger No. 4	ms	qı
Timax Mines Sureka	liant Lode Mine	don Tig	M. R. Claims	Tom Thumb
Clin	Gial	Cior	M.	Ton

OPERATING MINES IN LA PLATA COUNTY

P. O. Address Box 1303, Durango Box 3151, Durango 508 E. Main, Farmington, New Mexico 476 2nd Ave., Durango Box 56, Hesperus	
La Plata Canyon Steward Brothers La Plata Canyon E. M. Myers La Plata Canyon Cummings & Browning Muldoon Mtn H. E. Knudsen La Plata Canyon Oregon Mining Co.	
Name of Mine Location Brawner Tunnel La Plata C Lady Eleanore La Plata C Mary Alice La Plata C Mary Alice La Plata C Mary Alice La Plata C Myldoon Myldoon M	

OPERATING MINES IN LARIMER COUNTY

OPERATING MINES IN MESA COUNTY

Vanadium		Vanadium Vanadium Vanadium	Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium	
2940½ F Road, Grand —2940½ F Road, Grand —1940½ F Road, Grand —19415 N. 15th St., Grand —1940½ F Road, Grand	ction on	no.		1959, The St., Grand Junction. 201, Uravan. 267, Grand Junction	netion y 50,	Route 5, Grand Junction Uranium,	Grand Junction ————————————————————————————————————
Gardner & Son Mining Co. Ben Zimmerman Ace Turner Gardner & Son Mining Co. Workman Brothers Argo Mining Co. Beaver Mesa Uranium Co. Beal Mining Co. Beal Zimmerman, Inc.	George Liverman & C. Cuningham, Zanett Mining Co. Climax Uranium Co. H. L. Arbogast	Sterry Brothers	Melvin Green	Orr Mining Co. Doland Construction Co. Deal Mining Co. Edgave Mesa Uranium Co. Edgar Ball E. S. Knizley Grand Mining Co.		Ralph D. HickmanNeese, Moulton & JordanHerbert FosterRalph Foster & Sons	H. L. Arbogast Anadium Corp. of America Nanadium Corp. of America a. Thomas W. Holmes Beaver Mesa Uranium Co. —Model Mining Co. —Braver Mesa Uranium Co.
	Elizabeth Nos. 3 & 17	Government 2 O'tlaw Mesa Government 3 O'tlaw Mesa Government 4Ottlaw Mesa	gus	Henderson ————————————————————————————————————	Lease Beaver (Thornton Tunnel) Beaver Bov	os. 2 & 6 Inclines 1 & 2	Mineral Channel No. 12Outlaw Mesa New Verde (Horn Group)Calamity Mesa October AditBeaver Mesa Packrat GroupBeaver Mesa Rajah No. 28Beaver Mesa Rajah No. 68Beaver Mesa

OPERATING MINES IN MESA COUNTY (Continued)

	C			
	Vanadium Vanadium Vanadium	Vanadium	Vanadium Vanadium	Vanadium
Product	metion Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Rd	Tranium, Vanadium	Boston Bldg., Denver 2 Uranium, Vanadium Box 1901, Grand Junction Uranium, Vanadium	226 29 Road, Grand Junction Uranium, Vanadium
P. O. Address	Box 743, Rifle Route 4, Grand Junction Box 743, Rifle 215 Lands Down Rd			226 29 Road, Gran
Operator	Beaver Mesa Edward Horn Calamity Mesa John W. Ricks Beaver Mesa Edward Horn Outlaw Mesa DeVar Shunway	White, Green & Addison	Outlaw Mesa Associates, Inc	Calamity Mesa Ira Adamson
Location	Beaver Mesa Calamity Mesa Beaver Mesa Outlaw Mesa	Addison	10	Calamity Mes
Name of Mine	Sun Spot Sunflower Thundercloud Trojan No. 20	White, Green & Addison	Associates, Inc. Yellow Jacket No. 16 Yellow Jacket Incline	No. 15

OPERATING MINES IN MINERAL COUNTY

e Silver, Lead, Zinc	Ballver, Lead, Zinc	e Silver, Lead, Zinc e Silver, Lead, Zinc	Silver Lead Zine
CommodoreCreekCreede	Holy Moses Creek Creede Willow CoCreede	Monon Scheek Sublet Mining Co. Creede Outlet Tunnel Sax Willow Monon Leasing Co. Creede	CreekOutlet Mining Co.

OPERATING MINES IN MOFFAT COUNTY

Jranium Jranium Jranium
- 111
Craig
rajg St.,
64, Caylor
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Buffa Pione Frace
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May Crai May
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OPERATING MINES IN MONTEZUMA COUNTY

Blue Eagle Gold Dollar Large Mancos	salt Lake	Red Arrow Group East Mancos	Yellow Lizzard Cross Canyon Elree Young Sage Route, Dove Creek Uranium, Vanadium

OPERATING MINES IN MONTROSE COUNTY

Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium	Vanadium
Uranium, Uranium,	Uranium, Uranium, Uranium, Uranium, Uranium, Uranium, Uranium,	- (ranium, - (ra	
Farmington, New Mexico 215 Lands Down Rd., Grand Junction		Hox 451, Nucla Naturita Nucla Nucla Si 24 Road, Grand Junction Box 156, Naturita Nucla Sox 850, Uravan Box 27, Nucla Naturita Naturita Sox 448-1, Uravan Naturita Box 27, Nucla Hox 27, Nucla Junction	Box 335, Nucla Box 335, Nucla Fieldding, Utah Fieldding, Utah Box 850, Uravan 3500 Main St., Durango Box 127, Nucla Box 127, Nucla Box 127, Nucla Box 662, Rifle Uravan Box 156, Naturita Box 156, Naturita Box 156, Naturita Box 324, Naturita Box 324, Naturita Box 464, Grand Valley Box 345, Uravan Box 346, Uravan Box 247, Placerville Box 223, Norwood Box 223, Norwood
Farmingto 215 Lands Grand J	Norwood Norwood Box 156, Box 156, Durango, Naturita 2021 Wes Box 850, Irayan Roy 431	Isox 431, Nucla Vravan Naturita Nucla 831 24 Road, Gre Box 156, Naturita Nucla Box 850, Uravan Box 27, Nucla Naturita Box 27, Nucla Sox 27, Nucla Ay 121 Glenwood Av Junction	Box 335, Nucla lravan Frielding, Utah Durango Box 850, Uravan 3500 Main St., D 3500 Main St., D 3500 Main St., D Box 127, Nucla Box 127, Nucla Box 127, Nucla Route 4, Grand Box 662, Rifle Uravan Box 524, Naturi Box 156, Naturi Durango Durango Box 461, Grand Box 284, Uravan Box 284, Uravan Box 284, Uravan Box 284, Uravan Box 284, Uravan Box 284, Uravan Box 223, Notwoo
RimRex Uranium Co	s s	Long Park C. C. Sanders Martin Mesa Clifton Carter Long Park Gordon Reed & Edward Smith Long Park Russell Mayfield Eagle Basin Glenn W. Berry Monogram Mesa. C. N. Athy Monogram Mesa. Ted Stone & Sage Brothers Long Park Long Park Long Park Long Corlb Bunker Long Park Goldon Cycle Corp. Long Park Gordon Reed & Edward Smith Carpenter Ridge. Cecil Bunker Yellow Bird Bench Long Park Gordon Reed & Edward Smith Carpenter Ridge. Cecil Bunker Salow Bird Bench	Bull Canyon Emerson Williams Monogram Mesa Joe Weaver Monogram Mesa Li, W. Mining Co. La Sal Creek Li, W. Mining Co. Dolores Rim Lark Washburn Long Park Long Park Long Park Booth Eckman Long Park R. G. Shmns Monogram Mesa C. N. Athey Long Park Vanadium Corp. of America Long Park Long
Dolores Rim Spring Creek Mesa	Little Gypsum Valley Valley Sypsum Valley Monogram Mes Monogram Mes Monogram Mes Mall Canyon Bull Canyon Martin Mesa Carpenter Flat	Long Park Martin Mesa Martin Mesa Long Park Eagle Basin Monogram Mes Long Park Long Park Long Park Long Park Carpenter Rid Carpenter Ridg Yellow Bird Bench	Hull Canyon Monogram Mesa Monogram Mesa Ja Sal Creek Dolores Rim Jong Park Long Park Monogram Mesa Hull Canyon Bull Canyon Monogram Mesa Hull Canyon Monogram Mesa Hull Rayon Long Park
Adak All Star	American Eagle No. 4 American Eagle No. 8 Arcturus Aztec Group Baby Fawn Baby Ruth Badger Badger Bader	Bernard South Batty Jean Bitter Creek Black Dinah Black Foot N. & S.	Calvert Campus Cappla Cappla Cashin Cliff Dweller Club Group Club Group Club Group Coloradium Coloradium Coloradium Deer Shaft Diana Doagy Tunnel Dolores Donald L Dorothy Jean Dorothy Jean Duchess No. 2 Duchess No. 2 Duchess No. 2 Duchess No. 1 Duchess No. 1 Duchess No. 2 Duchess No. 1

OPERATING MINES IN MONTROSE COUNTY (Continued)

	Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium
Product	Uranium, Uranium, Uranium, Uranium,	Uranium,	Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium,	ion	Uranium, nction Uranium, Uranium,	Uranium, Iranium,	Uranium,	Uranium, Uranium,	Uranium, Uranium, Uranium,		Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium, Ion Uranium, Ion Uranium,
O. Address	I, Naturita S, Naturita Naturita S, Naturita	l, Nucla	i, Nucla 5, Uravan 3 Uravan	o 7, Urayan	nd Ju	Box 850, Uravan 831 24 Road, Grand Junction Box 423, Uravan	3, Uravan	o, Uravan	a, Dove Creek	a 0, Uravan	, land	6, Uravan 7, Nucla	Denver 2 Box 298, Naturita Box 218, Paradox P
P. O.	Box 324, Box 156, Box 177, Box 325,	Bedrock Box 591,	Box 596, Box 395, Box 423.		831 24 831 24 Box 19(Box 850, 831 24 Ro Box 423,	Box 256, Box 911,	Durango Nucla Box 850,	Naturita Box 165, Nuela	Uravan Naturita Box 850,		Durango Eox 296, Box 187,	1411 Mile Denver Box 298, 1 Box 218, Paradox 433 N. 7th Box 548, Box 195,
Operator	Harold Kincade a C. N. Athey s Marion Crandell	Charles E. DavisPaul Smith	Oral Clark & Art Harris Frank Power Brioker & Alexander	Levi Barnes Levi Barnes Neilson & Klingensmith	Delbert Burbridge Glenn W. Berry Climax Uranium Co.	Clenn W. Berry Rrickey & Alexander	La Verne Ray Roy Franklin	Vanadium Corp. of America Prank Elder Lark Washburn		Frank Stocklasa	1 3 3 1	Vanadium Corp. of America K. R. & D. C. Workman Delbert Burbridge	Anschutz Drilling Co Reed & Zufelt e Bill Snyder & Don Carlin e Clinton Oliver L. P. Development Co. William R. Pierce Warren Kuykendall
Location	Dolores Rim -Monogram Mesa -Carpenter Flats	l Lion Creek Bull Canyon		Long Park Long Park Long Park	Eagle BasinBull Canyon	Long Park Eagle Basin Long Park		Long Park Bull Canyon [ravan	Bull Canyon Wedding Bell Monogram Mesa	Club MesaClub Mesa	Club MesaClub MesaClub MesaClub MesaClub Mesa	Canyon Canyon Canyon Lolores Bench	Bull Canyon Carpenter Ridge Carpenter Ridge Carpenter Redge Bull Canyon Long Park Long Park
Name of Mine	East Dolores East Opera Box Edlipse	Evening Star Incline No. (Soldier Boy No. 1) Fawn Springs No. 7	Fawn Springs Nos. 9, 11, 12, 13, 21 Fawn Springs No. 15	Firebrid Firebracker First National Bank Florence Nellie East	Good Hope Nos. 1 & 2 Greagor Group	Great Western Grey Fox	Guadalcanal		Horsehair No. 1	Irene J. J. Mine J. M. Mine	Joe Dandy Joe Jr La Salle Lark Group	Little Basin Little Dick	Log Cabin Lone Pine No. 2 Long Park Incline Long Park No. 1 Long Park No. 3 Long Park No. 4

Vanadium	Vanadium
Uranium,	Uranium,
Box 473, Uravan Box 45, Uravan Lands Down Rd, Grand Junction - Cravan Nucla Naturita Box 36, Uravan Box 36, Uravan Box 37, Naturita Box 284, Uravan Box 1901, Grand Junction Box 395, Uravan Fruita Box 395, Uravan Fruita Box 395, Uravan Co, Uravan Box 37, Nucla Uravan Uravan Uravan Uravan Uravan Uravan Uravan Box 37, Viravan Uravan Uravan Uravan Uravan Uravan Uravan Box 376, Uravan Box 376, Uravan Box 376, Uravan Box 294, Uravan Box 296, Uravan Box 294, Uravan Box 294, Uravan Box 294, Uravan Box 296, Uravan Box 297, Uravan Box 296, Uravan Box 297, Uravan Box 297, Uravan Box 297, Uravan Box 298, Uravan Box 296, Uravan Box 297, Uravan Box 297, Uravan Box 376, Uravan	Box 386, Nucla
Frank Fedel Leonard J. Hurt Leonard J. Hurt Leonard J. Hurt Leonard J. Hurt Blake, Powers & Stocklasa Mesa Lowell Staats Raymond King Mesa Wilkins & Wolverton Raymond King Mesa Wilkins & Wolverton James Bamons O'Bryant & Powell Grimax Uranium Co. Mesa Climax Uranium Co. Mesa Climax Uranium Co. James Banton Rea San Richards Mesa Climax Uranium Co. Rea Sinart Rea C. Williams Rea C. Williams Rea C. Williams Mesa Lowell Staats Mesa Lowell Sta	Walter F. Burnett
Long Park Long Park Long Park Long Park Long Park Monogram Club Mesa Long Park Wild Steer Long Park Wonogram Long Park Club Mesa Monogram Long Park Club Mesa Rongram Monogram Long Park Monogram Monogram Long Park Club Mesa Bull Canyol Club Mesa Long Park Wonogram Dolores Rin Monogram Dolores Rin Long Park Club Mesa Long Park Long Park Curpenter Jeng Ratin Mes Long Park Curpenter Jeng Rock Creek Long Park Long	Faradox Valley
Long Park No. 6 Long Park No. 11 Long Park No. 12 Long Park No. 13 Lower Oversite Lucky Dog Incline & Shaft Maggie C. Dump Maggie C. Dump Many Ann No. 1 Mineral Joe No. 11 Mineral Joe No. 11 Mineral Joe Shaft Mineral Joe Shaft Mineral Joe Reline No. 1 Mineral Joe No. 11 Mineral Joe No. 11 Mineral Joe No. 11 Mineral Joe No. 11 Mineral Joe No. 14 Monster Now Campbird North Hunmer Hunder Hungare Hunder Hunder Hunder Hunder Hunder Hunder Hunder Hunder Hungare Hunder Hun	_

OPERATING MINES IN MONTROSE COUNTY (Continued)

	Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium	Vanadium
Product	Uranium, Uranium, Uranium, Uranium, Uranium, Uranium, Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium, Uranium, Uranium, Uranium,	Uranium,	Uranium,
	x ta ng, Utah a		ta t	421 Glenwood Ave., Grand Junction Box 386, Nucla Box 231, Uravan Box 850, Uravan Moab, Utah Box 376, Uravan Farmington, New Mexico Naturita A230 Tennyson St., Denver Box 461, Grand Valley Paradox Durango Box 371, Paradox
P. O. Address	224, Paradox 237, Naturita 277, Nucla 74, Nucla 645, Blanding, H, Naturita 206, Naturita	Uravan Uravan Uravan Uravan	Naturita Ouray Naturita I'ravan Naturita Naturita I'ravan I'ravan Ile	71 Glenwood Aver Grand Junction ox 386, Uravan ox 231, Uravan ox 376, Uravan ox 376, Uravan armington, New atturita 230 Tennyson St. ox 461, Grand V. aradox ourango
P. O	Naturita -Box 324, Box 237, Durango Box 277, -Box 74, -Box 545, Box H, 1	Naturita Box 337, Box 502, Naturita Uravan -Box 850, Box 878,	Box 235, N -Uravan -Uravan -Box 276, Or -Box 276, Or -Box 281, N -Box 284, N -Box 284, N -Box 384, N -Box 384, N -Box 173, N -Box 173, N -Box 274, N	-421 Glenwood Ave. Grand Junction -Box 386, Nucla -Box 231, Uravan -Box 376, Uravan -Box 376, Uravan -Farmington, New 7 -Naturita -Naturita -Say Tennyson St., -Box 461, Grand Val -Paradox -Landox
	f America	nsmith Huey Burnett ning Corp.	on of America	p. laldson (°o. on .f America Corp.
Operator	Vern L. Bagby C. W. Snyder Bernest Berry Vanadium Corp. of Phillip W. Bunker Harold Price Harold Price Adolphus Moore Carleton Bishop	Jess Campbell Nellson & Klingensmith Douglas Cleghorn Robert Wolney & Huey Bu Frank Stocklasa Lark Washburn Shattuck Denn Mining Corp.	Eugene Barnes G. H. Estes Bruno Zanett R. O. Grina London & Johnson Lee Elder Red & Zufelt Anilton Castor R. O. Grina R. O. Grina Lark Washburn Lawrence Ross Vanadium Corp. of	Walter Burnett Ronald Hutton Lark Washburn Lark Washburn Ray Shumway Marion Trone Less Campbell -Bay, Webb & Donaldson Co. Carl Tucker Snyder & Livingston -Vanadium Corp. of America Basin Excavating Corp.
Lecation	Sylvia's Pocket Anartin Mesa Jong Park (10) Mesa (10) Mesa (10) Mesa (10) Medding Bell Wedding Bell Bull Canyon Bull Canyon	Little experiments of the control of	Spring Creek Mesa Mesa Ball Canyon Bull Canyon Bull Canyon Bull Canyon Bull Canyon Bull Canyon Cong Park Long Park Long Park Long Park Hong Park	Mesa n n n n n n n n n n n n n n n n n n n
Name of Mine	Redbird Redbork No. 5 Redrock No. 5 Republican Reserve Block No. 1 Rimrock No. 3 Rimrock No. 5 Rimrock Sulues No. 5 Rimrock Blues No. 6	Roosevelt Sandy Sandy Sesmo Sharrrock Shartreck Shartuck Denn Shilus	Star No. 3 North Starlite No. 7 Steer No. 8 Straight Arrow Sunbeam Sunrise No. 3 Sunrise No. 4 Sunrise No. 4 Sunrise No. 4 Sunrise No. 4 T. N. T. No. 3 Trapot Dome Theapot Dome	Thunderbolt Tramp Group Trangulation U. S. Grant Uncle Sam Uprer Raven Uranium Girl No. 1 Uranium Girl No. 1 Uranium Uranus Uraka Vaden View Valley View (Lower Workings)

Uranium, Vanadium Uranium, Vanadium	Uranium, Vanadium Uranium, Vanadium Uranium Vanadium	Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium	
). of America Durango	L. E. Koss	Little Gypsum Vanadium Corp. of America Dolores Rim Martin Mesa Max Wainscott Dolores Bench Worcester Mines Dolores Rim Dolore	TOO TIES

OPERATING MINES IN OURAY COUNTY

American Nettie	Gold Hill	W. R. Nichols and O. C. Baker12 N	W. R. Nichols and O. C. Baker12 N. Junction Ave., Montrose Gold, Silver, Lead, Zinc, Copper
Big Andy	Poughkeepsie Gulch	O. K. Lybarger	Box 418, Santa Fe, New Mexico Gold, Silver
Camp Bird	Ouray	Camp Bird Colorado, Inc. Firs	2 Bank Bldg.,
Edna Frank Hough	Ironton Engineer Min.	_Mrs. G. W. BallardBrown Mining CoBox 1	73, Montrose
Greyhound		Diamond Jack Mining CoOuray	
Hoffy	Ironton	-Hoffy Mining Co625	625 N. 7th, Grand Junction Gold, Silver, Lead,
Magnet	Ironton	Hoffy Mining Co.	625 N. 7th, Grand Junction - Gold, Silver, Lead,
Martin	Ironton	Hoffy Mining Co.	625 N. 7th, Grand Junction Gold, Silver, Lead,
Monarch	_Poughkeepsie	Standard Uranium Corp264	264 S. 4th E., Moab, UtahGold, Silver, Lead,
Mountain King Nasby	Red Mtn.	Mayflower Mining Co Ouray	
North Star		George E. Wing	3040 E. 60th Place, Huntington Park, Calif Lead, Zinc
Old Lout Patsy Helen Group	Poughkeepsie Gulch Brown Mtn.	Standard Uranium Corp264	, Utah
Plymouth Premier	_Ironton	00	Colorado Springs

OPERATING MINES IN OURAY COUNTY (Coninued)

Product	Zine, Copper	
P. O. Address	Aztec, New Mexico	Red Mtn. Rouville Mining Co. Silverton Sneffels District Francis Consolidated Mining Co. Box 402, Ouray Ouray
Operator	Stoney MtnPolus & Lawson	Rouville Mining Co. strict Francis Consolidated Marie Marado Mining Co.
Location	Stoney Mtn	_Red Mtn. _Sneffels Di .ouray
Name of Min	Revenue Group	Roby Trust Treasury Tun

OPERATING MINES IN PARK COUNTY

OPERATING MINES IN PITKIN COUNTY

.Manganese

Basalt

Tanner & Prisley

_Snowmass

Big Buck

	" Uranium, Vanadium	Uranium, Vanadium
OPERATING MINES IN RIO BLANCO COUNTY	Butterfly Pits McAlester Fuel Co. Box 783, Meeker Burrell No. 3 Lranium Peak DeVar Shumway Grand Indention	Coal Creek No. 1Meeker John & Robert DadeMeeker

OPERATING MINES IN SAGUACHE COUNTY

Box 127, SalidaSilver, Lead, Zinc on 219 Bon Durant Bldg., Pueblo_Uranium	407 Independence Bldg., Colorado Springs Copper	Costello Motel, SalidaBonanza Route, Villa Grove-Silver, Lead, Zinc, Copper	Box 539, Gunnison Box 539, Gunnison Box 144, Gunnison Box 144, Gunnison Box 145, Gunnison Box 127, Salida Grove—Silver, Lead, Zinc Gold, Silver, Zinc
Antoro Bonito Corp. Bonanza Superior Mines Corp. Bonito Co., Inc. Co., Inc.	Copper Head Claim SpringsGendev Mining Corp	Fortinberry ClaimBonanzaRampart Mining Co JennyBonanzaB. G. Johnston	Lookout Lookout Los Ochos Los Ochos Manganese Gulch Charles Murray Pitch Tunnel Rawley No. 2 Rawley Nos. 3 Rooks 12 Rook

OPERATING MINES IN SAN JUAN COUNTY

Віасківамк	_Cement CreekSi	Cement CreekSilver Bay Mines, Inc	1787 Blaine Ave., Salt Lake City, Utah	ad,
Brooklyn	_Emporium Gulch_Frank Richardson		Box 546, Ouray Gold, Silver, Lead, Zinc, Copper	ad,
Burbank	_Clear CreekD	Denver-Golden Oil & Uranium Co.	First Nat'l Bank Bldg., Gold Silver	
Elk Park Property	Elk ParkG	Gaddis Mining Co.	ligh Center,	
Garry-Owen	Cunningham Gulch	Jarev-Shenandoah Corp.	SilvertonLead, Zinc	
Gold King	reek	Gold King Development Co.	Silverton	ad,
Hamlet	-Maggie Creek C	-Charles R. Hall	Box 366, Silverton Condition Lead.	ad.
Kansas City	Georgia GulchO	Olsen & Martz	Silverton Silver, Lead, Zine,	nc,
Mike's Strike	h:	-Dan Tipton	1714 S. 6th St., Ironton, Ohio Silver, Lead	
Osceola		Argyle Mining & Milling Corp Silverton		ad,
Pride of the West	Cunningham Gulch	Argyle Mining & Milling CorpSilverton	Silverton Gold, Silver, Lead,	ad,
Silver Cloud	Mill CreekT	Tom Gilliland	Box 492, Silverton Gold, Silver, Lead.	ad,
Terry Tunnel	Eureka CreekG	Grant Gifford	Silverton Gold, Silver, Lead.	ad.

OPERATING MINES IN SAN MIGUEL COUNTY

let	liver, Lead,	n, Vanadium n, Vanadium n, Vanadium n, Vanadium n, Vanadium	n, Vanadium n, Vanadium n, Vanadium n, Vanadium m, Vanadium	202222		n, Vanadium n, Vanadium n, Vanadium n, Vanadium		n, Vanadium n, Vanadium n, Vanadium n, Vanadium 1, Vanadium n, Vanadium	1, Vanadium 1, Vanadium 1, Vanadium 1, Vanadium
Product	Gold, Silver,	Zinc Uranium, Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium, Uranium,	Gold, Silver Uranium, V Uranium, V Uranium, V Uranium, V Uranium, V	Uranium, Uranium, Uranium,	Uranium, Uranium, Uraníum, Uraníum,	Tranium, Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium, Uranium, Uranium,	Uranium, Bog Iron Uranium, Uranium,
P. O. Address	Box 559, Ouray	Bgnar Slick Rock Dove Creek Dove Creek Box 675, Nuclea	Bidg.,	relluride oove Creek iucla	Moab, Utah alt Lake	urita	ıray		
Operator	Bast Ridge Co.	Burwell Mining Co. (* F. Suyder & Son Fritz & Erickson w Bachelor Mines by Pum Rice Dan Clesser		Oscar Blixt Lasalle Mining Co. 1 John Foy Elwood Kelly Merle D. Lloyd	McIntyre Canyon G. W. King Silck Rock Silck Rock Merle D. Lloyd Summit Canyon _Boyles Brothers Drilling Co		l l d	Carl Manasey Glen Gardner Dale Dillon Burwell Mining Co. Norman Wyers and Jack Milling Co.	
Location	Ingram Basin	Slick Rock Slick Rock Bachelor Draw Gypsum Valley	Patch Slick RockSlick RockSummit CanyonHamm CanyonHamm CanyonHamm Canyon	Bridal Veil Slick Rock Wedding Bell Spud Patch Slick Rock Wedding Bell	McIntyre CanyonSlick RockSummit Canyon	Big Gypsum Valley	Slick Rock Hill Slick Rock Slick Rock Gold King Basi	Slick Rock Slick Rock Slimmit Canyon Horseshoe Bend	Wedding Bell
Name of Mine	Andrus	Ann No. 2 April No. 1 Ava Jay Bachelor Shaft Lald Eagle	Bran No. 3 and Bean Pat Black Jack Black Spider Blue Clay Broadway	Burro No. 1 Burro Nos. 3, 5, 7 Burro Point Canyon Claim Charlotte No. 1		Dolores No. 2 Early Morn Group	Falcon No. 1 Fire Fly Full Moon Group Gold King	Hangover Hawk No. 1 Hazel Group Hogback Horseshoe No. 7 Ite No. 5, Incline No. 4	Jack Knife

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Vanadium Vanadium	Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium er, Lead,	Vanadium Vanadium	Vanadium Vanadium Vanadium	opper Vanadium Vanadium Vanadium Vanadium			Vanadium Vanadium Vanadium Vanadium Vanadium
Uranium,	Uranium,	Uranium, Uranium, Uranium,	Gold, Silver, Lead Zinc	Uranium, Vanadiu Uranium, Vanadiu Gold, Silver, Lead,	Zinc	Zinc, Copper Luranium, Vana Luranium, Vana Luranium, Vana	Uranium, Var Uranium, Var Uranium, Var Uranium, Var Gold, Silver,	Uranium,	Cranium, h-Uranium, Cranium, Cranium, Cranium, Uranium,
Box 1433, Grand Junction		Box 204, Naturita Box 206, Uravan Delta Box 575 Nucla		Hotchkiss	Slick RockSlick Rock	Dove Creek Dove Creek Dove Creek Redvale Frist Natl Bank Bldg.	Box 141, Nuclas Box 558, Dolores Box 412, Dove Creek Box 989, Cripple Creek Box 673, Ophir	First Nat'l Bank Bldg Grand Junction Box 308, Dove Greek Dove Greek Mancos Box 291, Grand Junction Slick Rock Naturita Nucla	Jost 1991, Grand Junction Cranium, General Delivery, Moab, Utah. Uranium, Slick Rock
Ortmayer Mining Co.	E. E. Lewis, IncJohn Neal Mining Co	William HolderCarl KinseyVorkman BrosJack Dick	Walliam Nixon Randy Belisle	John Neal Mining CoTex Cross E. J. Johannsen Herbert Williams	Samuel Johnson	Mario Dalpez Frman Dalpez Hollern & Hollern Mining Co. Hardin & Plantz, Inc. Dulaney Mining Co.	T. I. Green and I. L. Jackson. I. Thomas H. Skidmore I. Foy & Davis Mining Co. I. Uranium Shares, Inc.	Harold Ernst T. E. & S. R. Thompson Charles Pickens Star Mining Co. Merle D. Lloyd R. R. Wolney & Rex Holland. E. J. Johannsen	McIntyre Canyon_G. W. King Slick Rock Joe Davis HillWoodrow Gripe
Slick Rock	Spud PatchSlick Rock	Wedding BellHamm CanyonSpud Patch	Old Ophir	Spud Patch Spud Patch	Slick Rock Slick Rock Slick RockSlick Rock	Slick RockSlick RockGypsum ValleyGypsum ValleySlick Rock	Gypsum ValleyHorseshoe BendHorseshoe BendBishop Canyon	Slick RockBishop CanyonSlick RockSlick RockGypsum ValleyGypsum ValleyGypsum ValleyGypsum Valley	
LatriciaLegin Group	Lucky B	Mainstreet Mary Jane Moqua Jug	Navajo New Dominion	Norma Jean No. 1 Norma Jean No. 2 North Slope	Northern No. 6 Northern Light Ocumpaugh Pandora	Penigal & Penigal No. 1 Penigal No. 2 Pitch Fork No. 1 Pond Incline Radium Group	River View Roy Lee S. B. Group Sage No. 11	San Miguel Sitten Shaft Strawberry Roan Summit Group Sunday No. 2 Tallholt Tiny Unitah Adit	Vanadium Queen Veta Mad & Veta Glad Wally Claims Windswept Yellow Girl

OPERATING MINES IN SUMMIT COUNTY

Product Gold, Silver, Lead,	Zinc Gold, Silver, Lead,	Grove St., Denver 11 Lead, Zinc 1700, Grand Junction Silver, Lead, Zinc E. Evans Ave., Denver 22 Gold, Silver, Lead,	Zinc Silver, Lead, Zinc
P. O. Address Box 338, Breckenridge	Breckenridge	2432 Grove St., Denver 11 Load, Zinc Box 1700, Grand Junction Silver, Lead, Zinc 6363 E. Evans Ave., Denver 22 Gold, Silver, Lead,	mBreckenridge
Operator R. C. Moffitt	Green Mtn. Dam Silver Bull Mining Co.	PreckenridgeKnight Mining Corp. MontezumaNorbute Corp. Shoe BasinBash Mining Co.	Breckenridge Marvin Burger & Harold Horn Breckenridge
Location -Gibson Hill	Green Mtn. Dam	Preckenridge Montezuma Shoe Basin	Breckenridge
Name of Mine Alliance	Elg Four	Now York St John Slue Basin	Wellington

OPERATING MINES IN TELLER COUNTY

Box 127, Cripple Creek Gold Gold Gold Crest Mining Co., Inc Victor Cold Raven Hill Cresson Consolidated Gold	Globe Hill	Beacon Hill Mines, Inc.	Beacon HillJohn & Earl RobushGold HillDoepke Mining Co	Globe Hill Tenderfoot Hill Victor
Ajax Cameron Cresson	Cripple Creek No. 1 Deadwood	El Faso	Henry Adney Shaft International	Irumlad Mellie Kathleen Strotg

OPERATING QUARRIES IN BOULDER COUNTY

Product					SoulderStone
	Brodie's St. Vrain Quarries Box 325, Lyons Sterling Contracting Co. Box 124, Lyons	11	11	1	Perkins932 Evergreen, Boulder932 Arapahoe St., Boulder
tion Operator					1
	Knowland Knowland		McCall Lyons Pflefer Lyons		Stockton & PerkinsLyons United Building StoneLyons

OPERATING QUARRIES IN CHAFFEE COUNTY

	Mica, Feldspar, Bery Granite Feldspar Feldspar
MILLER COOMIL	Salida Sa
STREET, COLLINIA IN CHIMILIES COUNTY	Ute Trail Salida Granite Co. Salida Cranite Colorado Fuel & Iron Corp. Box 671, Salida Monarch Pass The Colorado Fuel & Iron Corp. Salida Cranite Cranite Colorado Fuel & Iron Corp. Salida Cranite Cranite Colorado Fuel & Iron Corp. Salida Cranite Colorado Fuel & Iron Colora
O VITT TIME TO	Lue Trail Silve Trail ar. Salid ar. Ute Trail Lue Trail
	Coffee Pot Claim Crystal Placer Homestake (Soda Spar). Monarch Lime Quarry

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PERATING QUARRIES IN CLEAR CREI
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Charles M. Winn, Jr., et al925 E. Otis St., LakewoodFeldsparCarl E. BallastFeldspar
Park Park
LodeBergen LodeBergen
eaver Brook Mica tradise Mountain
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ook Mica LodeBergen ParkCarl E. BallastRoute 1, EvergreenFeldspar	OPERATING QUARRIES IN COSTILLA COUNTY 11 Quarry & Mesita Colorado Aggregate, Inc. Mesita	OPERATING QUARRIES IN CUSTER COUNTY It No. 10) Rosita	OPERATING QUARRIES IN DELTA COUNTY rryAtlas Mining & Mfg. Co., Inc414 Main St., DeltaSulphur	OPERATING QUARRIES IN DOUGLAS COUNTY LittletonT. L. HelmerRoute 1, Box 94, Littleton Limestone, Sand	OPERATING QUARRIES IN EAGLE COUNTY Doterso	OPERATING QUARRIES IN EL PASO COUNTY Colorado Springs Castle Concrete CoBox 2462, Colorado Springs Concrete Aggregate reedColorado Springs Colorado Materials CoBox 183, Colorado SpringsConcrete Aggregate	American Crystal Taylor Guleh Frank H. Norberg Co. Denver 2 Denver 2 Denver 2 Denver 2 Denver 2 Denver 3 Denver
Beaver Brook Mica Paradise Mountain	Mesita Hill Quarry Crusher	Rosita (Pit No. 10)	Doty Quarry	Helmer	Dotsero - Roaring Fork	Castle _ Lennox Breed	American Crystal Calcite No. 4 Canon Dolomite Condale Cowan Travertine Horney Ganister Mica Lode Morning Star Portland Trail Gulch & Can

OPERATING QUARRIES IN GARFIELD COUNTY

Lime Gleny South Can Galde Berge South Cante Carte South Can Beach Platte Payn Quarry_Lyons Payn Quarry_Lyons Payn Quarry_Lyons Payn Quarry_Lyons Platte Pla	Norberg	Leonard Hollingsworth Box 1874, Star Route, Feldspar Box Haminerals Selection St., Denver 15 Feldspar Box 1874, Star Route, Feldspar Morrison Box 1874, Star Route, Feldspar Morrison Box 1875, Fort Collins Selection Contracting Co. Box 759, Fort Collins Filter Rock Box 1875, Malsh St., Westwood Feldspar	OPERATING QUARRIES IN LARIMER COUNTY Lake ——Colorado Stone Co. ——1635 N. Main St., Longmont.—Stone te ——Ideal Cement Co. ——Box 579, Fort Collins.——Limestone the ——Buckhorn Stone Quarry ——Masonville ——Stone Ranch ——Ernest W. Munroe ——Route 2, Box 273, Fort Collins. Gypsum and ——Lacobson-Lyons Stone Co. ——Route 2, Box 273, Fort Collins. Gypsum and ——Loveland ——Stone Lake ——Colorado Stone Co. ——Loveland ——Gypsum and ——Colorado Stone Co. ——1635 N. Main St., Longmont ——Stone Hill ——Arthur Ohline ———————Stone Hill ——Arthur Ohline ————————————————————————————————————	St., Denver 9 tt Collins Route, Loveland IY	OPERATING QUARRIES IN SAGUACHE COUNTY GroveVilla Grove Turquoise CoBox 171, Villa GroveTurquoise	OPERATING QUARRIES IN TELLER COUNTY Operation County, Pikes Peak Granite Co. Box 2323 Colorado Springs Monumental Stone
Name of Quarry Glenwood Springs Quarry Catherine No. 1 Hi Wan Madonna No. 1 Table Mountain White Cloud Crushing Plant Buckhorn Goodwin Hammons Jacobson & Lyons Loveland Quarries Joveland Quarries Goodwin Hammons McCodend Quarry Weaver Wild Stone Quarry Wild South Quarry	Springs Lime Glenwood Springs Frank H.	No. 1 South Platte Canyon No. 1 Bergen Park South Platte Canyon Oud Platte Canyon	Quarries — Carter of Quarry & La Pour Pour Plant — Mason Payne & Lyons Quarry Lyons Quarries — Lovela Quarry — Carter No. 16 — Lovela — Beach Plant Pl	Masonvil Masonvil Masonvil Masonvil	Villa	Black Cloud Black Cloud Pikes Peak Teller County, Pikes Peak Granite Co.

OPERATING PEAT BOGS IN BOULDER COUNTY

Product derPeat ilderPeat ilderPeat ilderPeat	GoldenPeat	ePeat	LER COUNTY Box 1074, Colorado SpringsPeat	OUNTY Product outClay	OUNTY CityClay	OUNTY "Littleton Clay "Denver 4 Clay nver 16 Clay Clay	COUNTY .
P. O. Address 115 13th St., Boulder. 520 Pearl St., Boulder. Ward	OPERATING PEAT BOGS IN GILPIN COUNTY Gawk Colorado Peat, Inc	OPERATING PEAT BOGS IN LAKE COUNTY Hayden Ranch Mt. Elbert Peat Moss Co., Inc Box 969, Leadville	OPERATING PEAT BOGS IN TELLER COUNTY	OPERATING CLAY MINES AND PITS IN BOULDER COUNTY Location Operator P. O. AddressRocky Flats	OPERATING CLAY MINES AND PITS IN CUSTER COUNTY WetmoreLaclede-Christy CoBox 110, Canon City	OPERATING CLAY MINES AND PITS IN DOUGLAS COUNTY Littleton T. I. Helmer Still Co. Solo Santa Fe Dr., Denver 4 Waterton Robinson Brick & Tile Co. Solo Santa Fe Dr., Denver 4 Castle Rock St., Denver 16 Castle Rock St., Denver 16	OPERATING: CLAY MINES AND PITS IN FREMONT COUNTY CANON CityWilliam R. Irvin
Operator W. H. Keasler Allen Trucking Co. W. F. Harms	RATING PEAT BOGS	ERATING PEAT BOG	RATING PEAT BOGS	G CLAY MINES AND Operator SColorado Brick Co	NG CLAY MINES AND	NG CLAY MINES AND PITS] T. I. Helmer Robinson Brick & Tile Co The Denver Brick & Pipe Co	G. CLAY MINES AND
Location Caribou Nederland S Nederland	Black		Gillette		OPERATID		OPERATING
Name of Bog Caribou Green Thumb Harms Peat Bog Mud Lake	Braecher Ranch Rudolph Ranch	Mt. Elbert Peat Moss	Alpen Meadows Bog	Name of Mine Spicer	Lawson	Helmer Hogback Ringenberg Stevens Ranch	I & E

OPERATING CLAY MINES AND PITS IN JEFFERSON COUNTY

Product	
Pro	CCDay CCDay CCDay CCDay CCDay CCDay CCDay CCDay CCDay CCDay
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Addre	, Bou hobia v Gold v Gold v Hory Ebox Ellswo elste 68th 68th 68th 68th Gold Gold Gold Gold Gold Gold Gold Gold
P. O. Address	Box 226, Golden "Box 226, Golden "Glay 1400 Jay St., Lakewood "Glay 1400 Jay St., Lakewood "Glay 1800 S. Santa Fe Dr., Denver 23 Clay Route I, Box 390, Golden 1739 S. Ogden, Denver 9 1739 S. Ogden, Denver 9 1740 Jay St., Lakewood 1740 Jay St., Lakewood 1750 S. Ogden 180x 226, Golden 180x 226,
	149 149 149 149 149 149 145 145 145 145 145 145 145 145 145 145
	Wesley D. Conda George W. Parfet Estate, Inc.—1804 126, Golden John L. Harvet Estate, Inc.—2470 Zenobia St., Denver I Lakewood Briek & Tile Co
	Estat F. Tile (Tile (Tile (Tile (Tile (Station) F. Tile (Estat (Co. – nstrucian)
	Wesley D. Conda George W. Parfet Estate, Inc. Lakewood Brick & Tile Co Robinson Brick & Tile Co Robinson Brick & Tile Co G. C. Bennetts Duane J. Burno Hansen & Weil Construction The Denver Fire Clay Co. Lakewood Brick & Tile Co. The Denver Fire Chay Co. The Denver Fire Clay Co. G. C. Bennetts G. C. Bennetts The Denver Brick & Pipe Co.
ator	W. I. W. W. I. W. W. I. W.
Operator	Wesley D. Conda George W. Parfet Lalohn L. Larvey. Lakewood Brick of Robinson Brick of G. C. Bennetts Duane J. Burno Hansen & Weil C Wheatridge Excay Lakewood Brick George W. Parfet H. M. Rubey Clay Hansen & Weil C George W. Parfet George D. Conda Wesley D. Conda
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Location	Rocky Flats Golden Wocky Flats Golden Waterton Golden Flainview Golden G
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Name of Mine	Moun Nood C Collet Golde Callet Golde C Collet C C C C C C C C C C C C C C C C C C C
Nam	C'hurch Green Mountain Harvey Caren Lakewood Clay Quarry Lariat Lariat Leyden Mt. Carbon Clay Pit- North Chieffain North Golden Pit No. 71den Pit Leyden South Golden South Golden South Leyden State Quarry State Quarry State Quarry

OPERATING CLAY MINES AND PITS IN PUEBLO COUNTY

Mustang The Standard Fire Brick Co24th & Albany St., Pueblo Clay Good PastureHarbison-Walker Refractories	5, 6
Chamblin Good Pasture	Meadow No. 5 Nellie Helen Rock Creek Stone City Nos. 1, 2, 3, 5, 6

OPERATING MILLS, PLANTS AND SMELTERS IN ADAMS COUNTY

Product	, Gravel	Sand, Gravel	Sand, Gravel
Pr	21Sand	Sand	Sand
P. O. Address	6101 Lowell Blvd., Denver 21Sand, Gravel	Ì	Denver 16
	Cooley Gravel Co. Brannan Sand & Gravel Co.	Brannan Sand & Gravel Co.	
	C00%	2	
or	ravel Sand	Sand	
Operator	Cooley (Brannan	Brannan-	
ration	er	er	
Lo	-Denv	-Denv	
Name of Mill or Plant Location		0Denver	
Till or		& 10	
of A	Plant	sos. 8	
Name	North Plant	Plant Nos. 8 & 10	

OPERATING MILLS, PLANTS AND SMELTERS IN ARAPAHOE COUNTY

ll Blvd., Denver 21 Sand, Gravel

7074	Lowell
	6101
	0.
	1 Co
2	Grave
	Cooley
2	
	Englewood
	Plant
	South

OPERATING MILLS, PLANTS AND SMELTERS IN BOULDER COUNTY

		LOMIDO DOMENTO	01 1/111/100		
Burlington Marion Marion Marion More Necco Necco More Portable or Junior Manior Manion Marion Marion Marion Marion More Necco More Portable or Junior Marion Marion Marion Marion Marion More More Necco More More	Beryl Pilot Plant Salida — Antero Refining Corp. — Box 550, Salida — Beryl Pilot Plant Monarch Pass — The Colorado Fuel & Iron Corp. — Box 316, Pueblo — Limestone Rampart Mining Co. Mill. Saneltertown — Rampart Mining Co. — Costello Motel, Salida — Feldspar Willing Salida — Feldspar Milling Salida — Feldspar Milling Co. — Box 671, Salida — Feldspar	Deek Eagle Mill Idaho Springs 5M Corporation Box 717, Idaho Springs 5Development Dumont Mill Springs 6M Milling Co. Dumont Mill Shrings 6Deper Silver Box 704, Idaho Springs 700per Silver Spruce Mill 1daho Springs 700per 7	OPERATING MILLS, PLANTS AND SMELTERS IN DENVER COUNTY Denver Denver Allied Chemical Division, Cilobe Plant Co. Co. Denver Service Suphuric Acid Co.	Pico Sulphuric Acid Plant-Rico Rico Argentine Mining Co. Rico Rico Argentine Mining Co. Rico OPERATING MILLS, PLANTS AND SMELTERS IN EAGLE COUNTY Coper Copper	Canon City Cotter Corp. Cotter Plant Canon City Cotter Corp. Cotter Co

OPERATING MILLS, PLANTS AND SMELTERS IN GARFIELD COUNTY

				1111110112 1121 01	-		
Plant Location Operator P. O. Address Product Rifle Location Carbide Nuclear Co. Rifle	OPERATING MILLS, PLANTS AND SMELTERS IN GILPIN COUNTY Central City ——Gold, Silver, Lead, Zine, Copper Black Hawk ——Royal Mining & Milling Co. Box 571, Loveland Gold, Silver, Copper largie) Black Hawk ——Soda Lakes Mining Corp. ——125 King St., Denver 19 Gold,	OPERATING MILLS, PLANTS AND SMELTERS IN GUNNISON COUNTY rushing Marble Marble Co. Mill. Gunnison Co. Creation C	OPERATING MILLS, PLANTS AND SMELTERS IN JACKSON COUNTY	ERATING MILLS, PLANTS AND SMELTERS IN JEFFERSON COUNTY nt	OPERATING MILLS, PLANTS AND SMELTERS IN LAKE COUNTY lantLeadvilleAmerican Smelting & RefiningLeadvilleGold, Silver, Lead, CoClimax Molybdenum CoClimaxMolybdenum	OPERATING MILLS, PLANTS AND SMELTERS IN LA PLATA COUNTY	OPERATING MILLS, PLANTS AND SMELTERS IN LARIMER COUNTY ————Masonville ————American Beryl Corp. Fort Collins ———————————————————————————————————
Name of Mill or Plant Rifle Plant	Glory Hole Mill Central City Golden Gilpin Mill Black Hawk Soda Lake Mill (Margie) Black Hawk	Basic Chemical Crushing Plant Gunnison Mining Co. Mill. Gunnison	OPERA	OPERATIN Beryl Ores Co. PlantAt Plant at Pit No. 11At Rio Grande PlantW Sterling Contracting CoT	OPER Arkansas Valley PlantLe	OPERATI	American Beryl

OPERATING MILLS, PLANTS AND SMELTERS IN MESA COUNTY Climax Uranium AillGrand JunctionChand JunctionSand, Gravel CoBox 1901, Grand JunctionSand, Gravel Gobot State	OPERATING MILLS, PLANTS AND SMELTERS IN PARK COUNTY Blue River Gravel Pit.—Jefferson ——Blue River Constructors ——Grant ——Sand, Gravel OPERATING MILLS, PLANTS AND SMELTERS IN PUEBLO COUNTY Mica Grinding Plant ——Pueblo ——International Minerals & Chemical Corp. ——330 West D St., Pueblo ——Ground Mica Chemical Corp. ——Bonanza Route, Villa Grove — Manganese Superior Mill ——James McRee ——Bonanza Box 127, Salida ——Lead, Zinc Tri-Em Mill ——Bonanza ——Argyle Mining & Milling Corp. Silverton ——Gold, Silver, Lead, Zinc ——Marcy-Shenandoah Corp. ——Silverton ——Lead, Zinc ——Lead, Zinc ————————————————————————————————————
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COUNTY	Product
N SAN MIGUEL O	2. O. Address
SMELTERS	
, PLANTS AND	Operator
ATING MILLS	Location
OPER	and Mill or Plant

Product Gold Gold, Silver, Lead,	Copper, Zinc Uranium, Vanadium	avel avel			Tourist				
Product Gold Silve	Copper	JNTY Sand, Gravel	INTX Gold	Product Gold Gold	Gold & T Gold & T Gold Gold	Gold	Gold	Gold	Gold
P. O. Address O. Ophir Outsy	ır Co. Slick Rock	PERATING MILLS, PLANTS AND SMELTERS IN SUMMIT COUNTY Plant Dillon Climax C. Byan & Son601 Wadsworth, Lakewood S	PERATING MILLS, PLANTS AND SMELTERS IN TELLER COUNTY Victor Golden Cyle Corp. Box 47, Victor	OPERATING PLACERS IN CLEAR CREEK COUNTY Operator Operator Operator Osprings Stephen J. Papp Lakewood Lakewood ation Lalvin C. Amrhein Box 566, Idaho Springs	OPERATING PLACERS IN GILPIN COUNTY Durand Brothers ar Creek William C. Spitts car Creek Floyd Hayes wk - R. F. Zacker Black Hawk	OPERATING PLACERS IN LAKE COUNTY M. E. Williams Box 33, Palmer Lake	OPERATING PLACERS IN PARK COUNTY Alma Placer Mining Co. Alma	OPERATING PLACERS IN SAN JUAN COUNTY reek Bungren & Garwood Box 715, Cortez	OPERATING PLACERS IN SUMMIT COUNTY IN Gulch Marriott-Moore Co. Breckenridge
Operator Belisle & Reed Idarado Mining C	Union Carbide Nuclear Co.	LLS, PLANTS AND SM Blue River Constructors C. Ryan & Son	CLS, PLANTS AND Golden Cyle Corp.	FING PLACERS IN Operator Stephen J. Papp	Gilpin – Durand Brothers – North Clear Creek William C. Spitts – North Clear Creek Floyd Hayes Black Hawk – R. F. Zacker	ERATING PLACERS	ERATING PLACERS IN	ATING PLACERS IN Sungren & Garwood	OPERATING PLACERS Gold Run Gulch Marriott-Moore Co.
Location Old Ophir Telluride	Slick Rock	PERATING MII Plant Dillon Climax	RATING MII	OPERAT Location Idaho Springs Ployd Hill Station	Gilpin North Clear Cl North Clear Cl Black Hawk	OP	OP	OPER Lime Creek	OPE
Name of Mill or Plant New Pendora Mill Pendora Mill	sllok Rook Mill	OPEI blue laver Crushing Plant Ryan Crushing & Washing Plant	OPER	Name of Placer Franks Placer Texaro	Cold Nugget Hayes Placer Zacker Placer	Luna Placer	Alma	Wild Goose	Jumbo

ROAD WORK, TUNNELS AND DAMS—1958

	Project Water Tunnel Water Tunnel	23 _Dam	5Tunnel	rgs Dam	23 Dam		Water Tunnel	Water Tunnel -Dam Construction	Water Tunnel	e Water Tunnel		Water TunnelWater Tunnel Water Tunnel
Ľ	P. O. AddressBox 217, Empire	-1340 S. Lipan St., Denver 23_Dam	_725 W. 39th Ave., Denver 5-	-Box 116, Hot Sulphur Springs Dam	-1340 S. Lipan St., Denver 23 Dam	1321 S. Main St., Salt Lake	Colorado Springs Box 921, Leadville	-Monticello, Utah -Box 260, Colbran	Grant	1321 S. Main St., Salt Lake City, Utah		Dillon Dillon St., Salt Lake City, Utah
CLEAR CREEK COUNTY	Operator Michigan Sewer Constructors Michigan Sewer Constructors	DELTA COUNTY Hopkins Construction Co	GILPIN COUNTY. Denver Tunnel Constructors	GRAND COUNTY Mountain States Construction Co.	HINSDALE COUNTY	LAKE COUNTY Boyles Brothers Drilling Co	Metropolitan Suburban Water Users Assn. Jones Lead & Zinc Mines	Theo Wood Construction Co	PARK COUNTY Blue River Constructors	PITKIN COUNTY Boyles Brothers Drilling Co.	SUMMIT COUNTY	Blue River Constructors Blue River Constructors Boyles Brothers Drilling Co
	LocationJones Pass	Paonia	East Portal	Parshall	Williams Creek	Leadville	funnel Turquoise Lake Tunnel Leadville	el_Colbran	Tunnel_Grant			Tunnel_Dillon _Montezuma Tunnel_K okomo
	Name of Operation Jones Pass Tunnel	Beaver Reservoir	Moffat Water Tunnel	Williams Fork Dam	Williams Creek Dam	Busk Ivanhoe Tunnel	Homestake Water Tunnel Leadville Drainage Tunnel.	Vega Dam Water Tunnel Colbran Vega Dam	Harold D. Roberts Tunn	Busk Ivanhoe Tunnel		Harold D. Roberts Tunr Montezuma Shaft Ten Mile Diversion Tunr

Core and Wagon Drilling Operations

Boyles Brothers Drilling Co. 1321 S. Main St., Salt Lake City, Utah	Colorado Plateau
Bureau of Reclamation Box 360, Salt Lake City, Utah	Colorado Plateau
Franklin & Perry Drilling Co. Box 546, Ozona, Texas	Colorado Plateau
Fritz-Erickson Mining CoBox 365, Dove Creek	Colorado Plateau
Johnson & Youvan Naturita	Colorado Plateau
Lippoth & Wein Drilling Co. Box 502, Grand Junction	Colorado Plateau
MacPherson Drilling Co. 324 N. Townsend Ave., Montrose	- Colorado Plateau
Minerals Engineering Co. Box 1951, Grand Junction	Colorado Plateau
Mitchell Drilling Co. 516 Lilac Lane, Grand Jurction.	Colorado Plateau
Sexton Brothers	Colorado Plateau
Sprague & Henwood, Inc. Box 1446, Grand Junction	Colorado Plateau







